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IN THIS ISSUE

To combine in one location all the facilities of its scouting, editorial, draughting and photographic departments, California Oil World, effective April 1, was established in larger quarters in the 939 South Broadway Building.

This unification of facilities will prove of particular benefit to the many readers of California Oil World whose practice it has been to visit the publication's offices in quest of information and other services. The increased accessibility of the California Oil World's services should make the publication's offices more than ever the Clearing House for California oil men.

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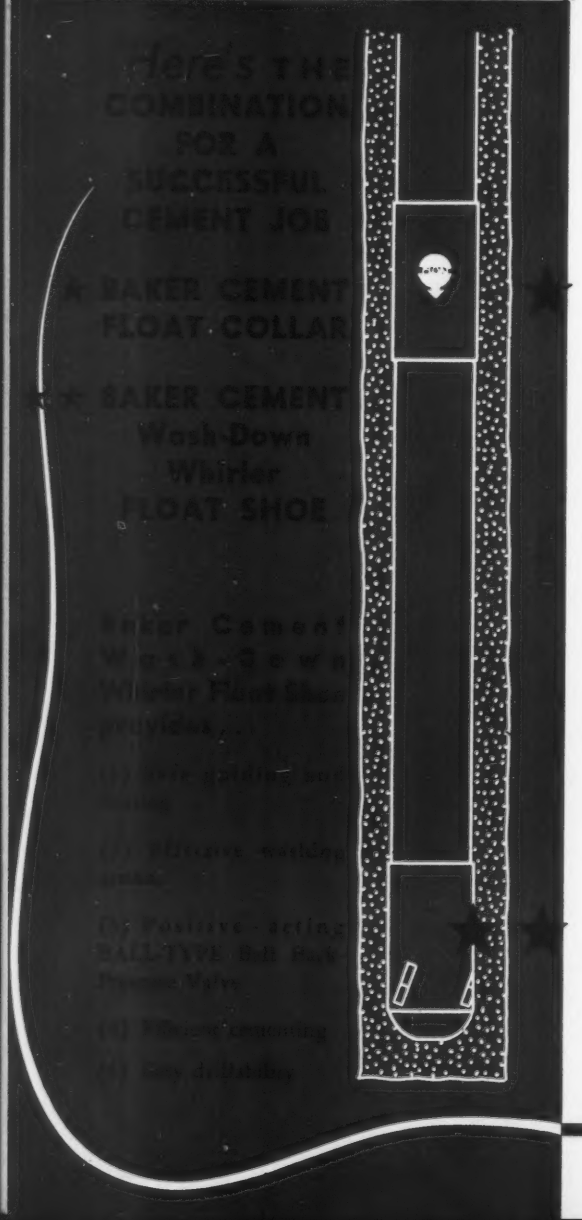

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Pictorial and News Reports of Activities

In the California Oil and Gas Fields

Del Valle Presents Correlation Problem

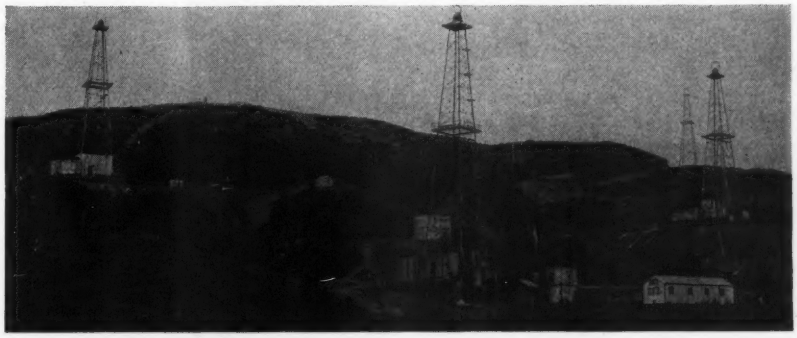
Rather than clarifying the Del Valle picture, the last two wells of R. E. Havenstrite, Operator, seemingly have further confused the issues. Vasquez No. 1, southeasterly outpost, drilled to 7102 ft. finding streaks of gray sand but not correlating definitely with Lincoln No. 1 or No. 2, present producers. Lincoln No. 3, located between No. 2 and the Vasquez well, at last reports was coring at 7351 ft. and had found only a heavy looking oil sand from 7275 to 7338 ft. even this showed streaks of gray. Apparently due to differences of sedimentation, neither Lincoln No. 3 nor Vasquez No. 1 correlates satisfactorily with the producing wells so each is now virtually a wildcat. The Sherman or upper zone productive in Lincoln No. 2 from 6037 to 6221 ft. and the Del Valle zone, open in Lincoln No. 1 from 6700 to 6954 ft., cannot be positively identified by either electric log or microfaunal correlations in the last two holes, according to Dean Sheldon, company engineer.

Lincoln No. 3, which now appears to be about 750 ft. lower than the discovery well, is being carried down while operations are suspended in the Vasquez well pending developments. Location is being graded for Lincoln No. 4 northeasterly from No. 1.

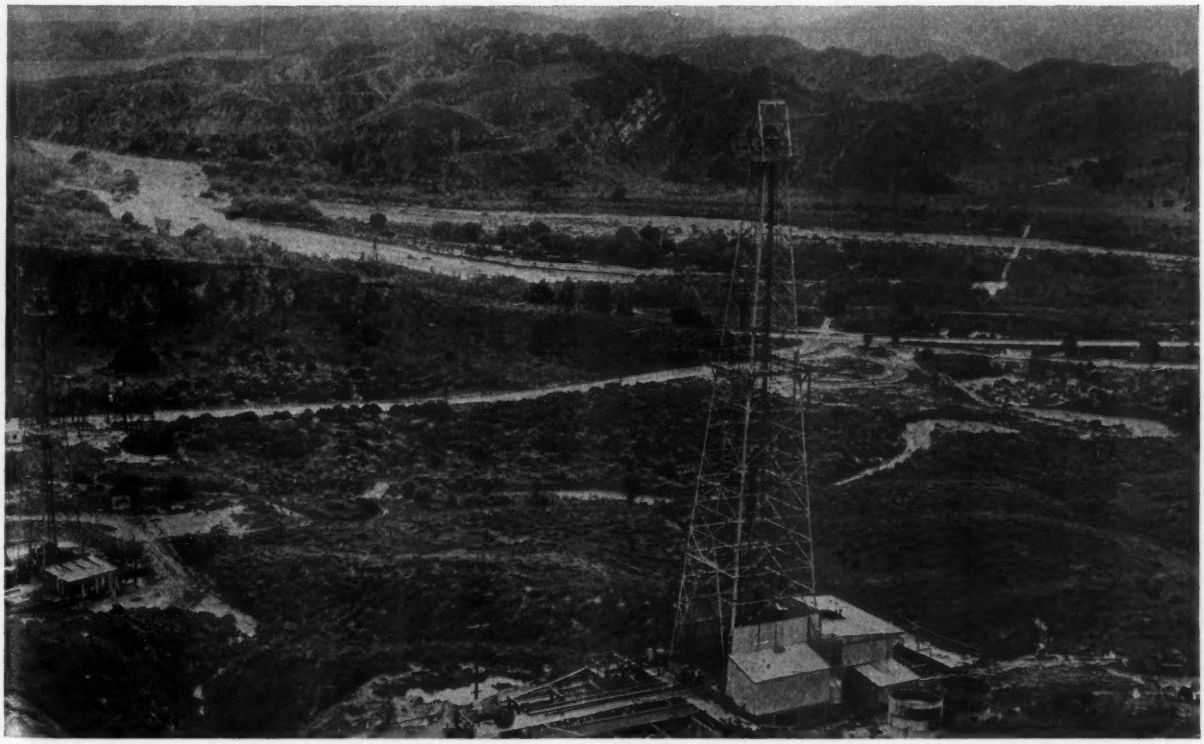
West of the field in sec. 17,4-17, Fred S. Jasper is resuming drilling after cementing surface casing at 415 ft.

Honor Ranch Well Cores Pico Showings

Hottest wildcat in the Castaic region at present is Barnsdall Oil Co.'s Honor Rancho No. A-17-1 in sec. 5,4-16. First showings were noted at 3888 ft. and considerable silty Pliocene oil sand had been cored to last reported depth at 4430 ft. As the well seeks production in the Modelo section of the Upper Miocene, no test is contemplated for the Pico showings unless they improve materially with depth.



Looking westward at Del Valle, the wells in foreground showed discouraging results for this side of the play.



Looking eastward, with Havenstrite's No. 3 in foreground, the distance holds Barnsdall's Honor Ranch test site.

Northwest of the Barnsdall well, Mangold & Morse Oil Co. is drilling at 1500 ft. in sec. 26,5-17. It is thought that the Modelo will be entered near the 2000 ft. level at this location.

Roy Young plans to get under way soon with an exploratory well on Conroy property in the Saugus area.

Cable Tool Wildcat To Drill Palos Verdes

Newton Development Co., headed by S. M. Newton of Denver, Colorado, is planning to drill a 3500 ft. cable tool test near the sea on the west side of Palos Verdes. Location is given as near the center of sec. 13,5-15.

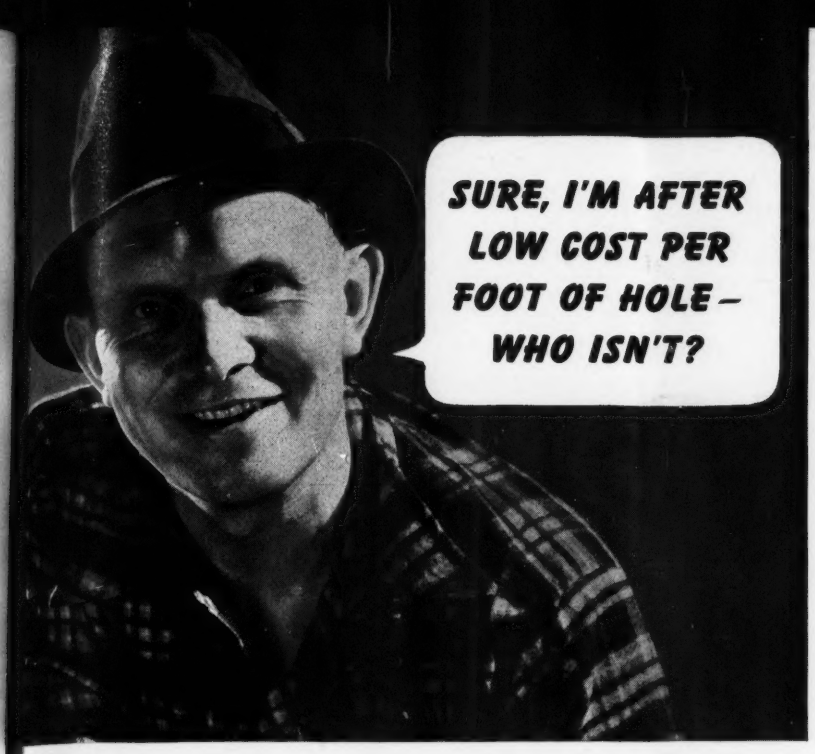
B. V. Hills Try Deep in Section

Honolulu Oil Corp.'s well No. 25-P in sec. 10,32-24 up in the Buena Vista Hills at the south end of the San Joaquin Valley has penetrated deeper into the geologic column than any of the previous wells in the old field.

Last reported in hard shale at 13,391 ft. which is below anything penetrated at the base of the hills, the well has the advantage of a high structural location permitting greater depth into formation on a foot for foot basis. Thus far the test has found little of interest by way of showings but has made interesting drilling history.

The well has far surpassed all previous records for depths drilled by electric rigs. A record believed to have been achieved some 2000 ft. back. The feat is

Top right, the "cat" jockeys a load of mud up to a Del Valle driller. Center, left to right, Dean Sheldon, Ed. McWhirter, and Homer Havenstrite, all of R. E. Havenstrite, Operator, still have lots of Del Valle territory to explore with the drill. Below, here is the natural gasoline plant at Del Valle.



"So, I* said it's worth paying for, isn't it?"

*THE REX MAN

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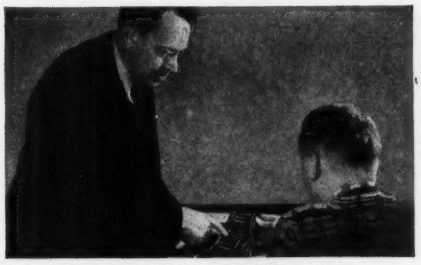
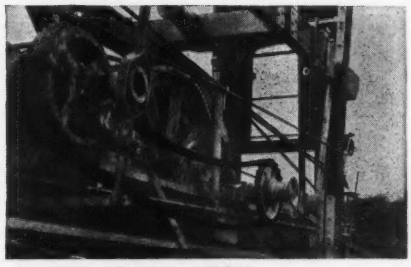
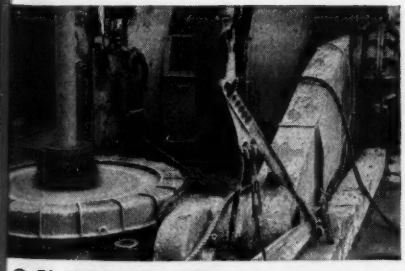


② REX CHAMPION IS WHAT YOU WANT! Here's a chain designed to meet the needs of drillers operating under tough conditions and drilling extremely deep. Look at these accurately forged side bars, better-than-ordinary lubrication methods, and a forcefit assembly that is insurance against destructive rocking!



③ SURE, CHEAPER CHAINS have their place! When the oil lies close to the surface, when speeds aren't too high, and other conditions are favorable, there's where you can use lighter, less rugged chains. And as you know, Rex has them all—from heaviest to lightest—in the Rex line. But in fields like yours—



④ TO AVOID HIGH COST, which results from too-rapid wear, and subsequent frequent replacement expense, Champion's the choice for you! Like hundreds of others, you'll find that Champion's additional cost over lighter chains is more than offset by the additional service it will give you.

⑤ AND REMEMBER... when you buy Rex oil well chains, you're buying the benefits that come from Rex's close contact with men like you, since the earliest days of drilling! Rex oil well chains have always been the standby of cost-conscious operators, and I'm sure that you'll feel that way after you've used them.

⑥ HE CALLED ME BACK after he'd used his first Rex oil well chains. "Say," he said, "the records have just come in, and I find that Rex has given us a real dollars-and-cents saving per foot of hole every place we've used them. You were right when you said it was worth paying for a longer-lasting chain."

P.S. *Don't forget Rex roller chains! Available in single or multiple width strands, they're an oil field standby for high speed, "slim hole" drilling! Rex Roller, Rex Champion, Rex Deepwell, Rex Standard and Rex Universal (in single and double strands), cover all oil well drilling needs. Ask your local supply dealer about them, or write directly for complete information. Address 1627 W. Bruce Street, Milwaukee, Wisconsin.*

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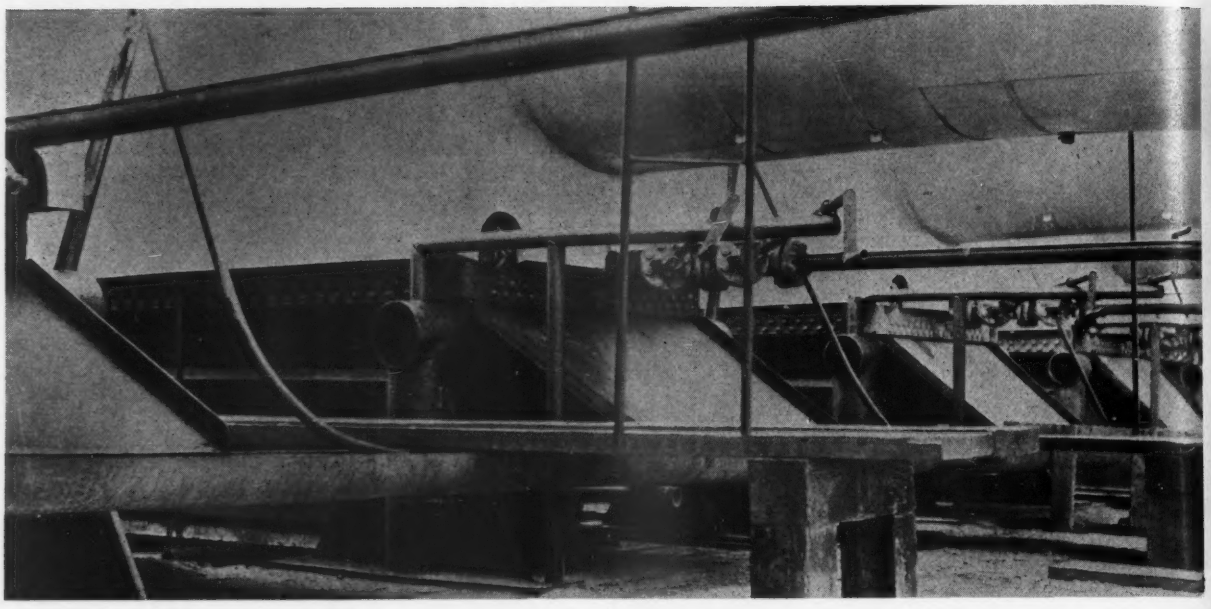
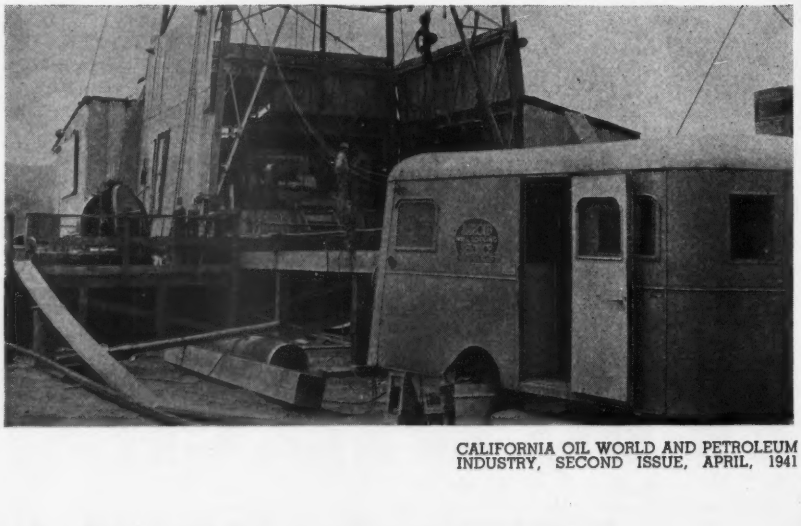


Here are the specially designed boiler fire boxes which Standard is using to increase power plant capacity at its Elk Hills deep test.

It's quite a record this electrically powered rig is making for Honolulu in Buena Vista Hills.

made more remarkable by the fact that the electric rig in use was designed for only moderate depth and is by no means new.

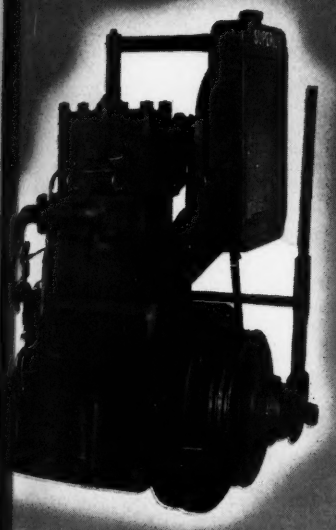
While the footage has been gained slowly, the company is living up to its original intention which was to explore to as great a depth as equipment in use would permit, barring a commercial strike before the maximum was reached.

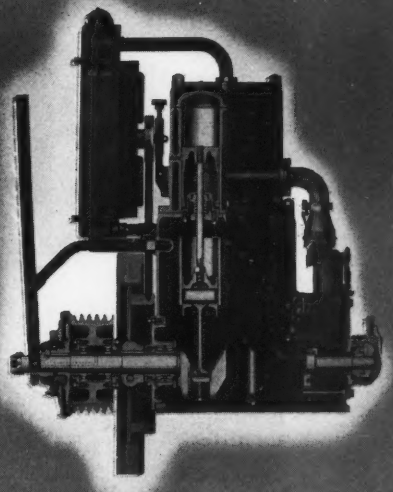


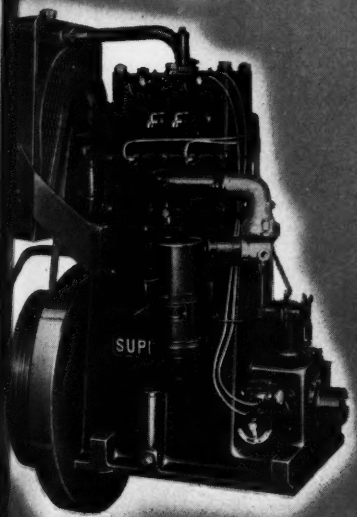
The mud analyzer (logging) laboratory keeps close check on Del Valle exploration.

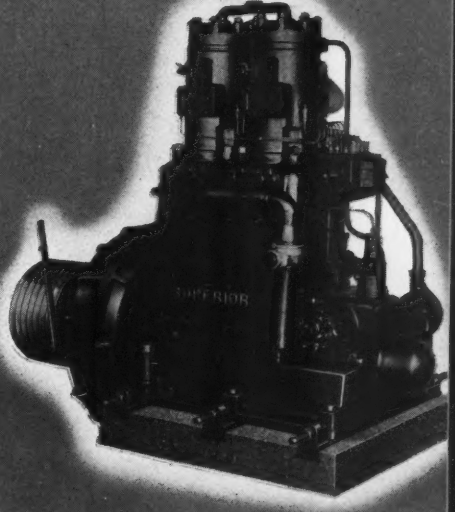
Superior OIL FIELD PRODUCTION ENGINES

Medium-Speed Vertical 2-Cycle, 2-Cylinder GAS ENGINES









SUPERIOR medium-speed vertical twin-cylinder 2-cycle gas engines are more economical to operate, have a longer life expectancy and can be installed with only slightly more expense than the high-speed multi-cylinder types of engines. Many hundreds are in use driving single well pumpers, pumping gears, geared powers, and kindred applications where loads range from 5 to 50 H.P. These vertical engines retain the simplicity, accessibility, reliability, long life and low operating cost that are found in the horizontal type which they resemble in design. Crosshead construction eliminates oil pumping and contamination of crankcase oil, thereby reducing lubricating oil consumption.

The engine is completely equipped with built-in clutch, water pump and radiator (excepting Type GB does not have radiator). The smaller sizes are usually mounted on extended pumper base for service in the open.

Double row Timken roller main bearings (excepting GB which has removable shells). Ground cylindrical crossheads run in honed guides. Full metallic packing for piston rods. Governor and magneto gear driven. Special mixer throttles both air and gas for good regulation. Roller bearings in clutch. Splash lubrication in crankcase, oil bath for gear box and force feed to cylinders.

Special provision for accessibility: Large hand holes in crankcase. Any assembly may be removed without disturbing engine on its mounting.

Conservatively rated for continuous service.

Twin-Cylinder Type	DVA	EA	FB	GB
Size, bore x stroke, ins.	4 x 5	5 x 6	6 x 7	7½ x 8
*Effective piston displacement per revolution, cu. in.	125.7	235.6	395.8	706.9
Rated B. H. P.	10	20	30	50
Rated R. P. M.	700	700	600	600
Speed range, R. P. M.	400-800	350-700	400-650	400-600
Descript. Bulletin No.	280	293	174-B	217

*Multiply this displacement by 2, to obtain equivalent displacement of a 4-cycle engine.

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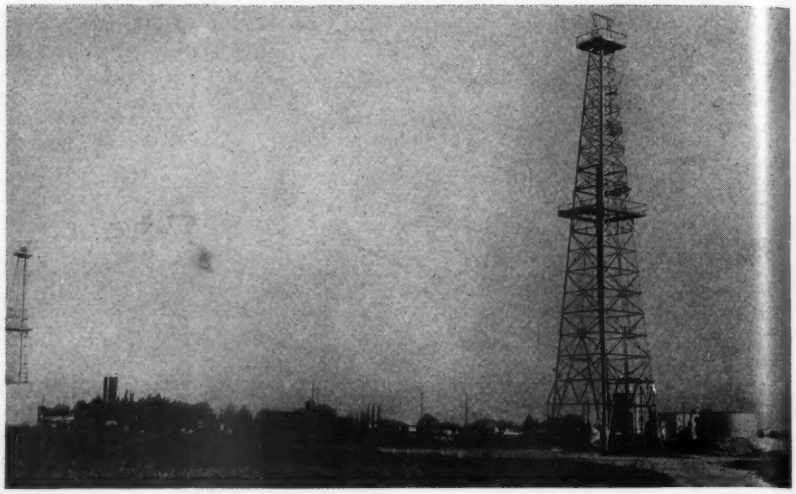
Union's E. B. Noble Made Geologists' V. P.

According to word received from the American Association of Petroleum Geologists, E. B. Noble, Union Oil chief geologist, was elected a vice-president of the Association at the annual meeting held recently in Houston, Texas.

Boasting a membership of over 3200 representatives from all sections of the United States and foreign countries, the Association, together with its affiliates, The Society of Exploration Geophysicists and the Society of Economic Paleontologists and Mineralogists, is considered one of the world's most active scientific societies.

Chairman Charles Neeley and Author J. E. Hurn, at the A.P.I. session at Long Beach.



At this time Hancock's Avenue field, just at the edge of Bakersfield, promises pumpers.

Canyon Oil Opens Los Angeles Office

Canyon Oil Co., headed by T. J. Martinson of Long Beach, has opened offices at 945 Wilshire Blvd., Los Angeles. The company is extensively interested in the Newhall area where two exploratory wells are under way on its holdings.

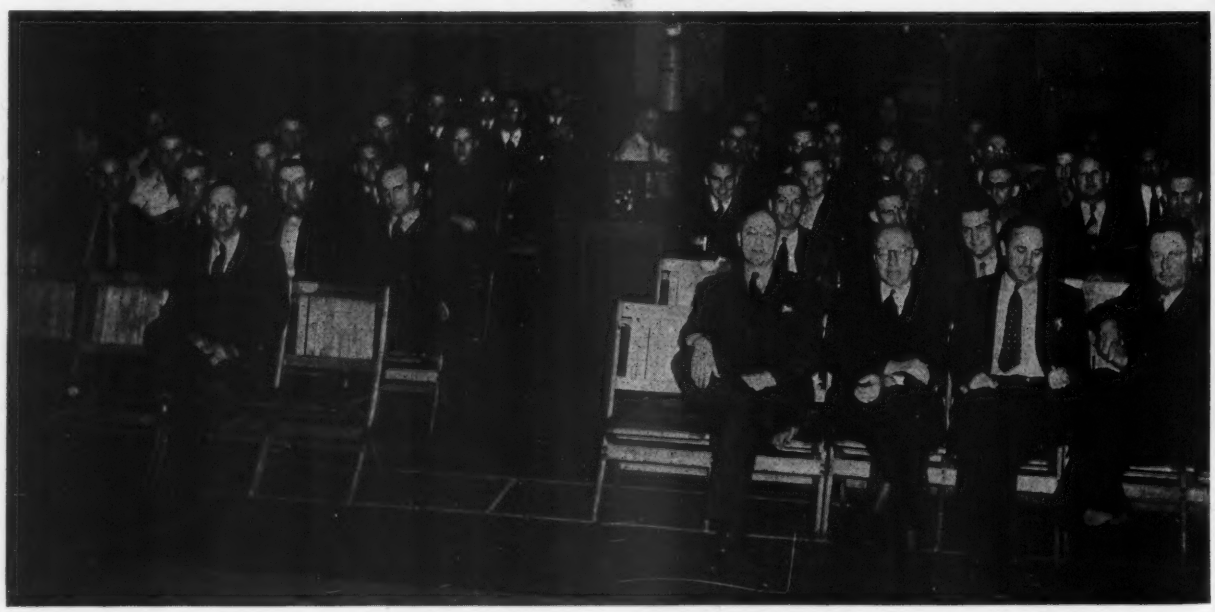
Bartholomae Deepens East Coyote Project

After deepening to 6700 ft. Bartholomae Oil Corp. ran an electric log in Stern No. 5 at East Coyote preparatory to running casing. The well is located in the westerly section of the field near the Brea-Fullerton highway. In the same section, Standard Oil Co. recently deepened Coyote No. 2-10 to 7030 ft. and completed on the pump for 350 bbls. a day cutting 25%.

At the east end of the field near the intersection of the Pacific Electric and Santa Fe railroads, Fred Garliepp is cleaning out the old Continental Oil Co. Carlton Comm. No. 2. It is planned to make a production test of 2500 ft. showings.

California National Oil Co.'s north side outpost is reported pumping 40 bbls. of 21 gravity oil cutting 50% from 3400 ft. while Carlton B. Wood's Basten No. 1 in the Carolina St. sector makes about 50 bbls. cutting 25%.

(Continued on Page 37)



It was a gathering of experts who heard James E. Hurn, of DeLuxe Prod. Corp., at the monthly Multi-cylinder Engine Sub-committee, A.P.I., on Signal Hill. His paper was entitled "Lubrication of Internal Combustion Engines."

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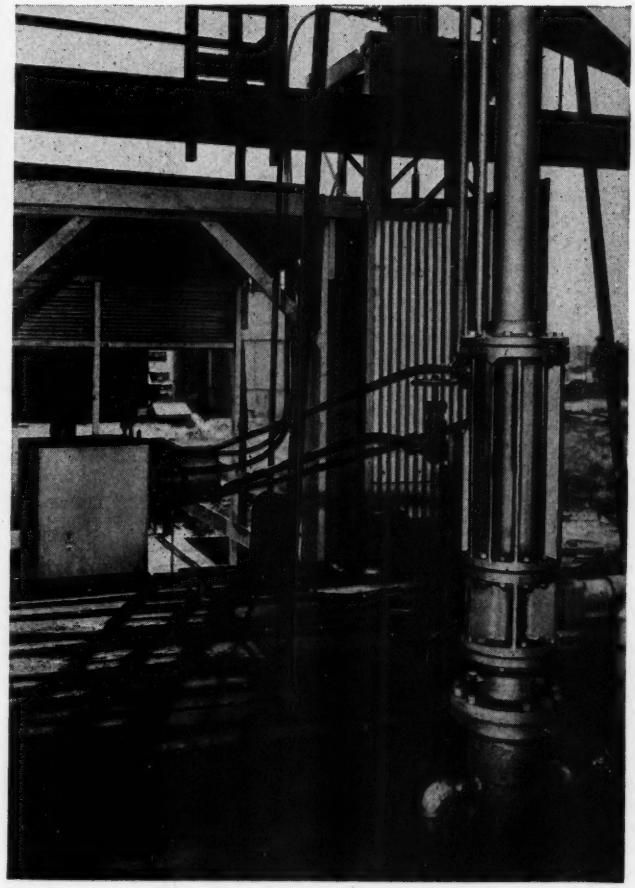

Vickers hydraulic pumping unit at Signal Hill, operated by a compact, dependable 7½ horsepower electric motor.

There's only one way to figure the cost of pumping. That's to figure the TOTAL operating cost during the useful life of the power unit. When all the costs are included—investment, taxes, repairs, depreciation, labor, etc.—no other power unit can equal the over-all operating economy of an electric motor. The figures show that electric pumping is cheaper as well as more convenient and dependable. That's why more and more electric pumping rigs are being installed in California. For real pumping economy, plus long trouble-free service, equip your wells with electric motors.

GET THE FACTS ABOUT ELECTRIC PUMPING . . . CALL YOUR EDISON OFFICE

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4-41

California Standard Subsidiary Expanding

Exploration Work in Alberta

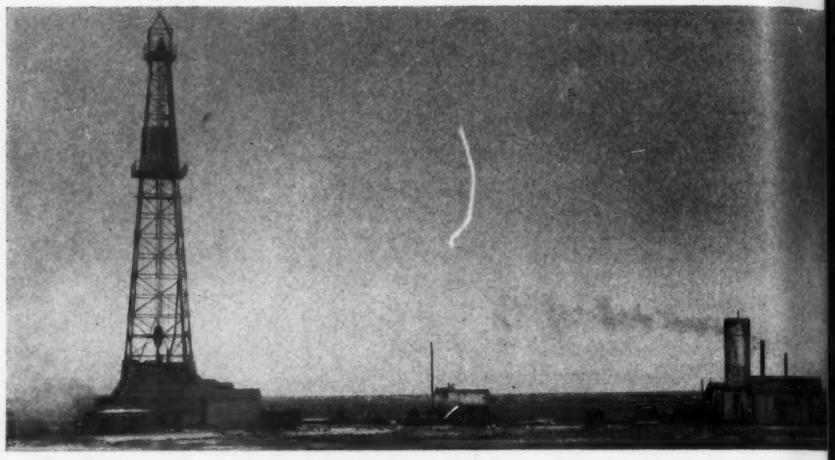
Reprinted from the Standard Oil Bulletin.

In 1939, Standard Oil Company of British Columbia, Limited, a wholly-owned Company subsidiary, announced its entry into the Province of Alberta, an expansion which has since acquired particular timeliness in the development of Dominion strength.

Actual exploration work had begun in the Spring of 1938, but even before that the Company had been interested for a number of years in the oil possibilities of this province. In 1938 a representative was established on the ground and his investigations together with the information previously gathered by the Company, showed prospects worthy of more detailed examination. Geophysical work began in June and ended in November—the working season in Alberta is necessarily short due to weather conditions—but those five months were enough to disclose attractive structural anomalies (folds and earth strata that reveal possible underground stores of oil). So, in 1939, oil and gas leases on prospective lands which had been acquired in Alberta by The California Company—a Company subsidiary operating in the Rocky Mountain area of the United States—were transferred to Standard Oil Company of British Columbia, Limited, to enable it to take over drilling and producing operations in Canada.

North of Latitude 50°, where the leases are located, the terrain is generally rolling plains, with no natural windbreaks to speak of, and in the Winter the thermometer sometimes drops to 40° to 50° below zero. That would be trouble enough for drilling operations to overcome but when Spring arrives, in April or May, working conditions become still more difficult. The thaws set in then, softening the field roads almost to impassability. But unlike geophysical work, which, being confined to surface recordings, is more delicate, well-drilling can go on in any weather which will permit men to live and by some means or other move their materials from place to place. Accordingly, the drilling program in Alberta has gone on through Summer and Winter months alike, until the wells were either successfully completed or abandoned.

The first drilling venture, C. P. R. Princess Well No. 1, was begun in mid-Summer of 1939 and continued into the year 1940. This well was located on lands leased from



An oil field without a number of derricks looks bare, but Standard Oil Company of British Columbia, Limited, started from "scratch" in Alberta. Above is C. P. R. Princess No. 3.

Since the discovery of oil in C. P. R. Princess Well No. 2, last October, drilling operations have been carried on without interruption in other parts of the field. Shown in the background here is the derrick of C. P. R. Princess No. 3. The workmen are making up a three-inch flow line from well to loading tank.

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Tret-O-lite is successfully dehydrating crudes in every oil field from Michigan to Texas and from Louisiana to California. Experienced field men and capable laboratory scientists cooperate to provide the petroleum industry with the most efficient demulsifying compounds available. This sincerity of effort, coupled with nation-wide coverage by Tret-O-lite representatives, provides the petroleum industry with a service that is truly capable of SERVING.

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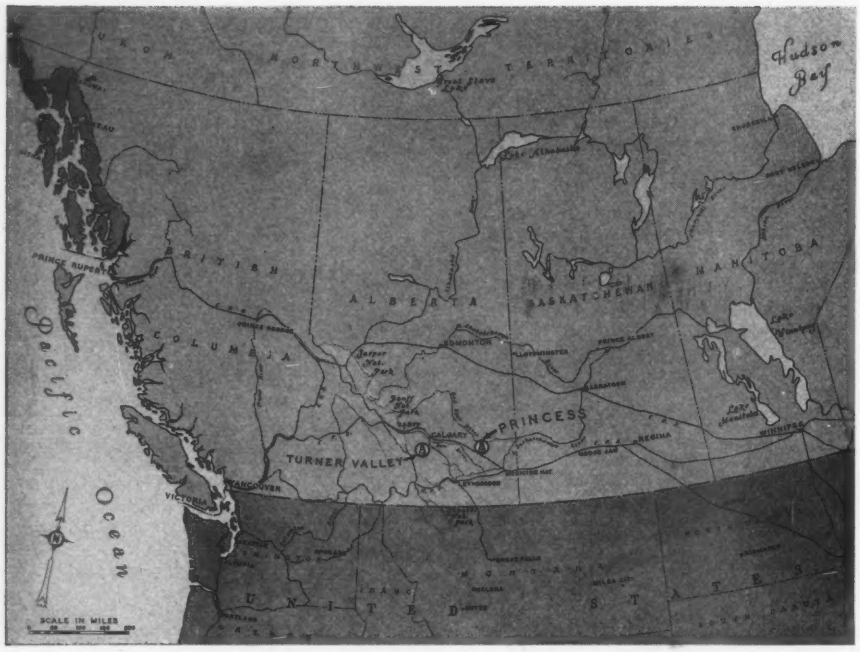
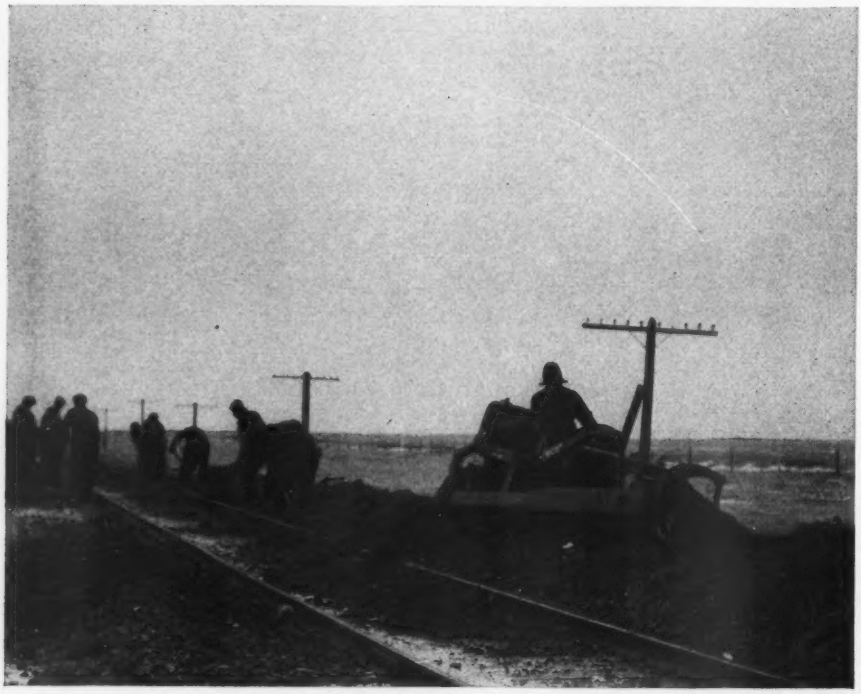


The Dominion of Canada is vast but its oil production so far has been light. The Turner Valley field, Southwestern Alberta, is producing about 22,000 barrels a day but there were no other known oil reserves in the part of Western Canada shown here until the Princess field, some 125 miles east of Turner Valley, came in.



In the dead of winter, with the thermometer often reading 40 degrees below zero, laying spur track is one of the least pleasant of the many man-sized jobs that go with the opening of a new oil field. This spur was built in the Princess area to connect Standard's central loading facilities with a branch line of Canadian Pacific.

the Canadian Pacific Railroad Company and was carried to a total depth of 6,155 feet. Some oil was encountered between the depths of 3,250 and 4,250 feet but endeavors to complete the well as a commercial oil producer were unsuccessful. However, it was completed as a gas well at a depth of 3,180 feet.

With C. P. R. Princess Well No. 1 as a starter, Standard of British Columbia then began drilling what was known as Tidelake Province Well No. 1, about 20 miles southeast of C. P. R. Princes No. 1. The Tidelake well was spudded in on June 10, 1940, on lands leased from the Province of Alberta and drilled to a total depth of 4,250 feet. No commercial showings of either oil or gas was found, however, and the well was abandoned as a dry hole in August of that year. Production men felt it advisable to make a third test in this area because of showings in the first well and also because of further geological and geophysical work which had been carried out. So the Company drilled C. P. R. Princess No. 2, located about three miles southeast of C. P. R. Princess No. 1. C. P. R. Princess No. 2 was spudded on October 5, 1940, and drilled to a total depth of 4,250 feet. As the test of the formation between 4,197 and 4,250 feet did not result in production in appreciable quantities, the well was then plugged at several different depths and tests made of the showings encountered. Finally, at a depth of 3,260 feet, it came in with its good yield of 26° gravity oil and 13,000,000 cubic feet of gas a day under high pressure, and as briefly reported in a recent issue of the Bulletin, it is now known to be a potential producer of at least 500 barrels of oil daily.

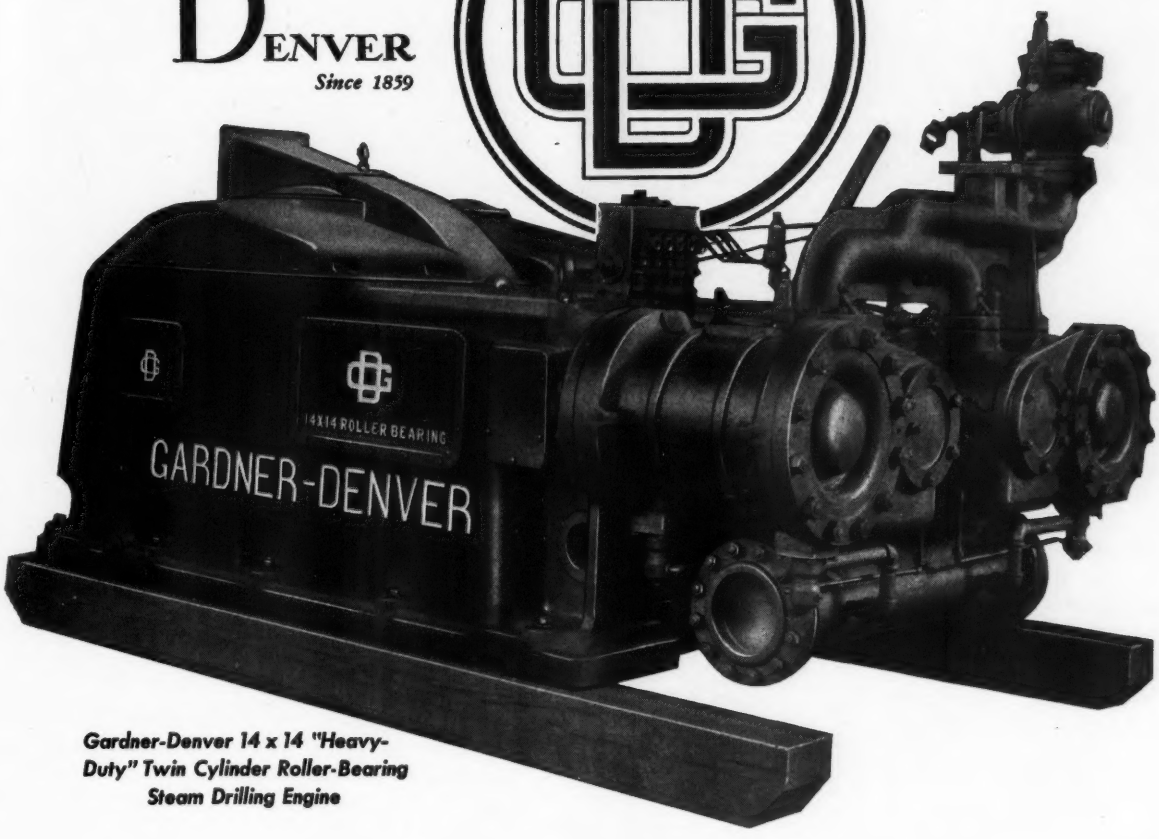
C. P. R. Princess No. 2 well is located on a large structure 20 miles long, on which the Company holds in excess of 50,000 acres, of which it is estimated that several thousand acres are probable oil land. The discovery is the first commerical oil produced in the Great Plains region, and the nearest oil in Western Canada to the larger markets.

The story of the discovery of oil in commercial quantities in Canada's Great Plains region could,

(Continued on Page 35)

GARDNER-DENVER

Since 1859



Gardner-Denver 14 x 14 "Heavy-Duty" Twin Cylinder Roller-Bearing Steam Drilling Engine

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The REPUBLIC SUPPLY COMPANY OF CALIFORNIA

We Even Make the NAMEPLATES Corrosion-resistant

Because it's a "combination" starter, the CR7008 offers these advantages:

1. Easier installation—motor starter and motor-circuit switch come to you in one "package."
2. Increased safety—all "hot" parts are enclosed.
3. Three-way protection—undervoltage, overload, and short-circuit.

BESIDES being corrosion-resistant, more than 20 features in this new oil-immersed combination starter contribute to lower installation and maintenance costs, greater dependability, and greater safety.

You'll want to make sure you include this new starter in the plans for your modernization or expansion project. Our nearest representative will be glad to go over your requirements with you. General Electric, Schenectady, N. Y.

GENERAL ELECTRIC

The following letter was received from the author of "Report on the Williams Area of Midway-Sunset," published in the First Issue, April, 1941, of the California Oil World.

W. T. WOODWARD
Consulting Petroleum Engineer and Geologist
Security Building—209 Fourth St.
Telephone 33
Taft, California

April 15, 1941

Mr. Walter C. Monroe, Editor
California Oil World
939 South Broadway
Los Angeles, California

Dear Mr. Monroe:

Thank you for the material returned and for the copies of your paper containing my report on the Williams Area. I am delighted with the layout.

However, errors, all of which were mine, have come to my attention since returning the published article. They are as follows:

Page 3, first column, third paragraph, fourth line, instead of "1928", should be "1929".

Page 7, first column, last paragraph, second line, "1928" should be "1929".

Page 7, third column, next to last paragraph, lines 11 and 12, "Northeasternmost" should be "Northwesternmost".

Page 9, first column, third paragraph, third line, "(¼')" should be "(1 to 4')".

Thank you very much for your generous cooperation.

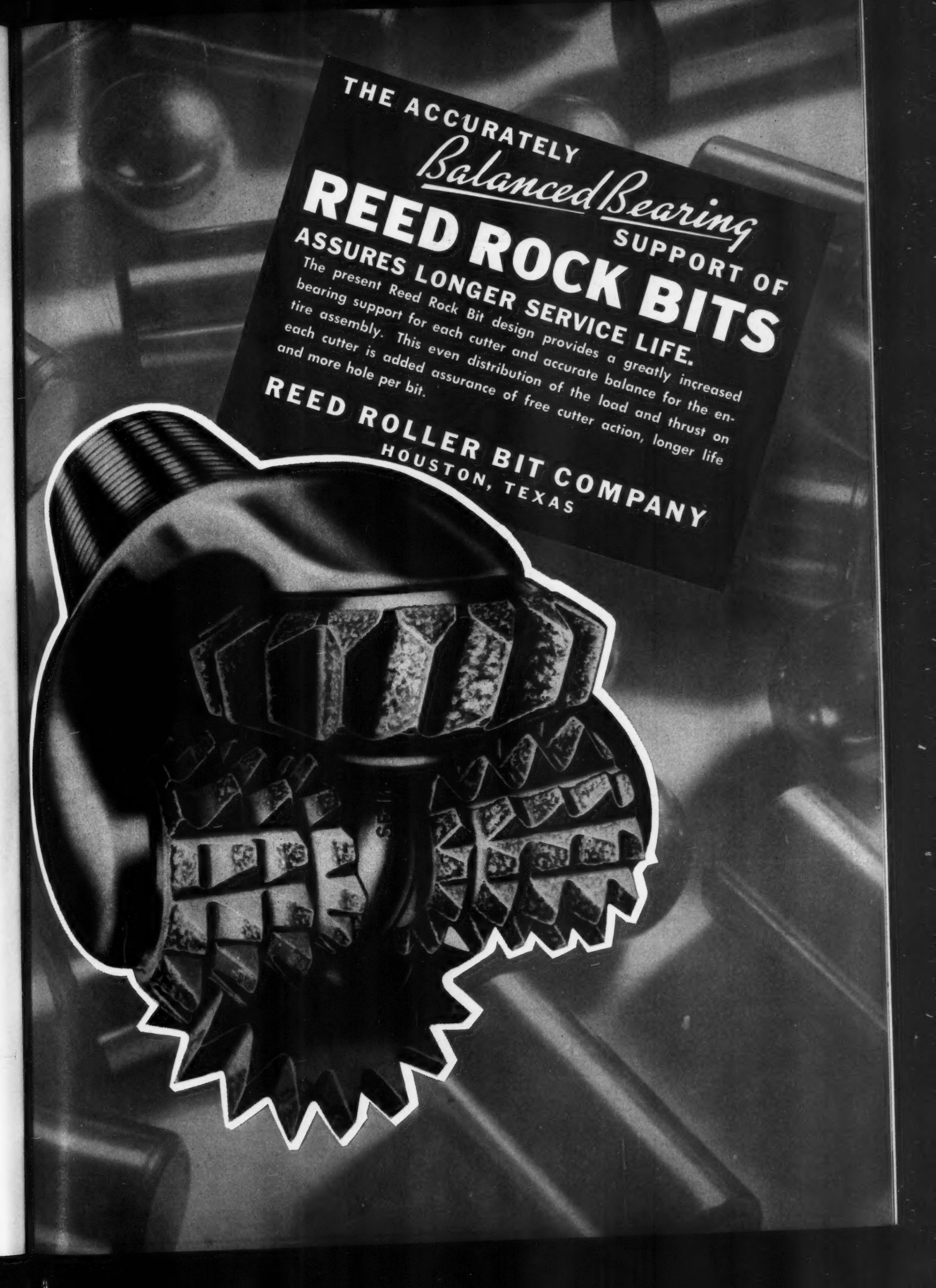
Yours very truly,
W. T. WOODWARD
(Signed)

C. N. G. A. To Stage "Gadget-Kink" Contest

California Natural Gasoline Association announces that it will hold a "Gadget-Kink Contest Night" on Friday, May 9 at the Lebec Hotel on the Ridge Route. The affair will be a joint meeting of the Los Angeles and Taft chapters of the Association and will take the place of the May meetings of both. Eight cash prizes and ten additional awards will be given for the best gadgets or kinks, and anyone except company officials in the natural gasoline, natural gas, or allied industries may enter the contest. Entry blanks for the contest may be secured from George L. Tyler, C. N. G. A. secretary, at 510 West Sixth Street; J. A. Campbell, Long Beach; C. S. Beard, Fellows; and R.N. Donaldson, Taft. Prizes will be awarded on a basis of originality and ingenuity, 10 points; value, adaptability, and practicability, 10 points; simplicity and convenience of construction, 10 points.

U. S. B. M. Describes Oil Supply From Coal

Experiments in applying the hydrogenation process to American coals indicate that this country can develop enormous amounts of gasoline and oil from its coal reserves, the Bureau of Mines reported on April 10 to the Secretary of the Interior. The Bureau's process, if applied to the total coal reserves of the United States, could yield enough oil to supply the nation's needs for almost 3,000 years at the present rate of consumption. Coal reserves are estimated at some three trillion tons—enough to yield three trillion, 800 billion barrels of oil. With the nation's petroleum reserves limited by nature, the hydrogenation process which has been worked out in the Bureau of Mines Pittsburgh laboratories gives assurances for the future of the gasoline age.


THE ACCURATELY
Balanced Bearing
SUPPORT OF
REED ROCK BITS
ASSURES LONGER SERVICE LIFE.
The present Reed Rock Bit design provides a greatly increased bearing support for each cutter and accurate balance for the entire assembly. This even distribution of the load and thrust on each cutter is added assurance of free cutter action, longer life and more hole per bit.
REED ROLLER BIT COMPANY
HOUSTON, TEXAS

Gas Engine Ignition Phenomena Paper

Presented Before C. N. G. A. April Meet

By C. E. Miller
Union Oil Co. of Calif.

In the 17th century, I believe, an Italian gentleman by the name of Galvani fashioned a crude wet battery and then, with admirable scientific curiosity, he touched the wires to the nerves of a pair of freshly butchered frogs legs. The way those frogs legs jumped around would have caused an ordinary individual to quail before the monstrous heresy he had done. But Mr. Galvani was stout-hearted, he persevered, and today the "Galvanometer" is a highly important electrical instrument.

In the 10th century Benjamin Franklin drew sparks from a wire line with which he was flying a kite in a thunderstorm.

In the 19th and 20th centuries a long list of distinguished men have performed experiments and laid down theories which have linked electricity and its phenomena with light, with the composition of matter, with the human body, and in short, with every phase of our lives. So electricity with all of its uses and attendant phenomena is a vitally interesting subject. Tonight I propose to speak to you on certain electrical phenomena in connection with gas engine ignition. They have a very practical significance for any operator of a compressor plant.

An internal combustion engine has to have some means of igniting the charge of explosive mixture within the cylinder at the precise instant when it should be ignited. Early designers used a small, enclosed flame or hot bulb which was exposed to the charge at the proper moment. This was never very dependable and it is now practically extinct in favor of electrical ignition.

Electrical ignition may be either of the low-tension make and break type or the high tension jump spark type. The low tension make and break type of ignition works on the electrical principle that if a circuit, containing a coil and a low voltage source of current, is broken a high enough voltage is momentarily generated in the coil to cause a spark to jump between the separating electrodes. The make and break system is electrically simple and short circuits are not likely to occur because of the low voltages used. However, it involves the use of moving parts within the cylinder and for this and other reasons most all of our gas engines of today use the high tension jump spark system.

In the jump spark system there are within the cylinder two fixed terminals, with a short intervening gap, across which a spark jumps when sufficient differences of potential have been developed.

In its simplest form the apparatus has two circuits as shown in the slide with heavy lines representing the "low-tension" circuit and the light lines the "high-tension" circuit. B is the source of electromotive force such as magneto or battery, T is a rotating timer, C a condenser, K a coil and S a spark plug.

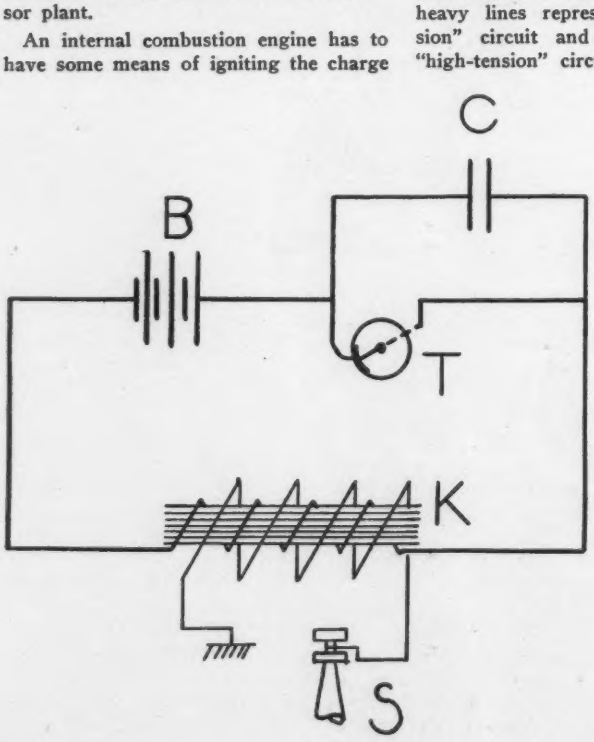
In operation, the primary circuit is closed by the timer T and then suddenly opened by it with the result that a spark jumps between the terminals of the plug. The action of the coil is as follows: When the primary circuit is closed by rotation of the timer, the magnetic field induces an electromotive force in the secondary circuit. This is not great enough, however, to cause a spark to pass between the plug terminals. But when the primary circuit is quickly broken, the sudden collapse of the magnetic field about the core of the coil induces for the instant in the secondary circuit a very high potential difference, which may be made sufficient to cause the passage of a spark, with resultant ignition.

The function of the condenser, which bridges the timer in the primary circuit, is to prevent sparking at the contact points of that apparatus, and to reverse the collapsing magnetic field so as to give a higher voltage in the secondary.

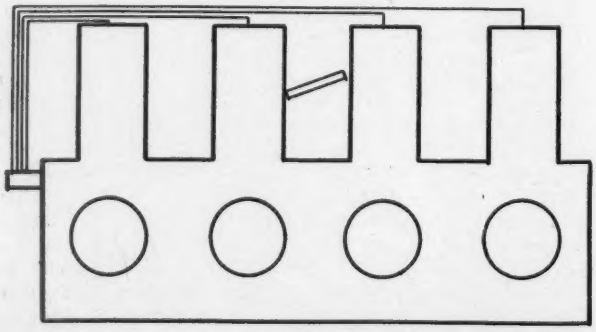
Now, as operators of gas engine compressors and multiple cylinder gas engines, we are interested in an ignition system which will give us a good spark at the right instant. We want dependable ignition and we want it to operate as cheaply as possible and as safely as possible. Almost universally we use the jump spark system just described with usually a magneto as the source of the electricity.

On the angle type gas engine compressor the high tension magneto is commonly located at one end of the engine and the high tension electric current is distributed and sent out through wires to each spark plug.

Now suppose you happened to bridge the gap between two adjacent power cylinders with a wrench or file or bar and you found, when you had one end of the bar touching one cylinder and the other end an eighth of an inch from an-



Left, Slide No. 1; Below, Slide No. 2.



other cylinder that you drew a spark across the gap. Off hand it doesn't make much sense because those cylinders are solidly bonded together with heavy iron at the frame of the engine. But a second try would convince you that the spark was there. And if you looked further would probably find sparks bridging gaps between various other metal parts of the engine.

This stray spark jumping has been observed by several different operators on different makes of engines but it has not been discovered on all of the angle type engines and to my knowledge it has not been discovered at all on the horizontal units. When it occurs it is unquestionably a hazard as a source of ignition for inflammable vapors near the engine.

Stray sparking will be eliminated if all of the high tension leads are completely enclosed in a metal tube conduit and the conduit grounded to the engine frame. Some engines come from the factory so equipped. Unfortunately, however, when leads are in a grounded metal conduit, greatly reduced spark plug life is soon noted, and, in the long run more magneto repairs will be necessary. One large operator of gas engine equipment reports the following proof of the first point. A spark plug life test was run on a stationary multiple cylinder engine and on a stationary heavy duty engine. The A C Spark plug tester was used in the test. This instrument indicates the effectiveness of the spark under operating conditions. There are 5 selective positions on the tester. A plug that will fire when the tester is in the No. 5 position is in excellent condition. If the tester must be in the No. 4, No. 3, No. 2, or No. 1 position to fire the plug, a progressively poorer condition is indicated in the order named, and at the No. 1 position the engine operation is very poor. On the multiple cylinder engine test, the point at which the plugs were discarded was when they could not be regapped and cleaned to "shoot" No. 5 on the A. C. Tester.

Result of test on multiple cylinder gas engine:

a. With high tension wires in metal conduit plug life—3 months.

b. With high tension wires in non-metallic conduit plug life—14 months.

Note: In the above tests the load was constant at about 45-lbs. BMEP and 1200 ft/min. piston speed. The same type of plug was used in both tests and both tests were on the same engine.

You will particularly note that the longer the high tension lead in conduit the more serious is the effect on the spark plug.

So we find ourselves on the horns of a dilemma—if we shield the high tension leads with conduit we burn out the plugs in a hurry and put an extra strain on the magneto. If we don't we are liable to the hazard of stray sparks. As a solution suppose we eliminate the long high tension leads. This may be done by using a low tension magneto and running low tension leads to each cylinder with a spark coil mounted as near as possible to each spark plug. This spark coil will transform the low tension current to high tension current at the spark plug and we then require only a few inches of high tension lead. A typical wiring diagram for an ignition system of this sort is shown on the following slide.

Rotation of Magnet A, causes flux changes in the field structure. These in turn generate low tension current in the magneto coil B. At the position of the magnet where this current is greatest, the breaker contacts C, are opened by the Cam D. The resulting reaction in the primary of external coil P, whose distributor contacts are closed, produces high tension current in the secondary winding of that coil and causes a spark to jump the gap at spark plug S, to which it is connected.

This low tension magneto system of ignition has been tried by at least two operators of angle type units. They report complete elimination of stray sparking of the short high tension leads are shielded and grounded. They also report excellent spark plug life and less magneto maintenance. In one case a low tension magneto system in continuous service ran for a period of two years and three months without a failure of any kind. At the end of this period the magneto was taken down for checking, cleaning and lubrication even though it was still giving satisfactory performance. The average overhaul period for high tension magnetos on this same engine is one year.

At this point it should be in order to take a brief look at our electrical theory and attempt to explain why those stray sparks jump when the wires are **out of** conduit, why spark plug and magneto life is shortened when the wires **are in** conduit and why the low tension magneto system solves both problems.

When a shot of high tension electric current passes through an ignition wire it throws out around the wire a magnetic field of considerable intensity. This field builds up and collapses again in a very few millionths of a second and induces a transient current of extremely high frequency characteristics in the frame and cylinders of the engine. We know that at extremely high frequencies a small inductance becomes a tremendous impedance to the passage of electricity. It therefore appears logical to assume that the metal frame connecting two power cylinders of an angle type engine has enough inherent inductance to build up a high impedance to the passage of this transient current. When we lay a bar or wrench between cylinders we offer another path for the current to follow and it takes that path as well as the other. Don't think that this is in the nature of a new concept. The same phenomenon has been observed on partially open crude tank gauge hatches during thunderstorms. In this case a spark will jump from hatch to tank even though the hatch is connected to the tank with a husky metal hinge. This hinge offers large impedance to the high frequency current which is induced in the hatch and so the current chooses to

Slide No. 3

SPARK PLUG LIFE TEST ON LARGE, HEAVY DUTY, ANGLE TYPE GAS ENGINE

A. High tension wires **in metal conduit** original plug gap = .016" after 9 weeks continuous operation:

Cylinder	A C Tester	Gap
1	3	.042"
2	3	.055
3	3	.070
4	3	.065
		.232 ÷ 4 = .058"

.058" — .016" = .042" Av. point wear.

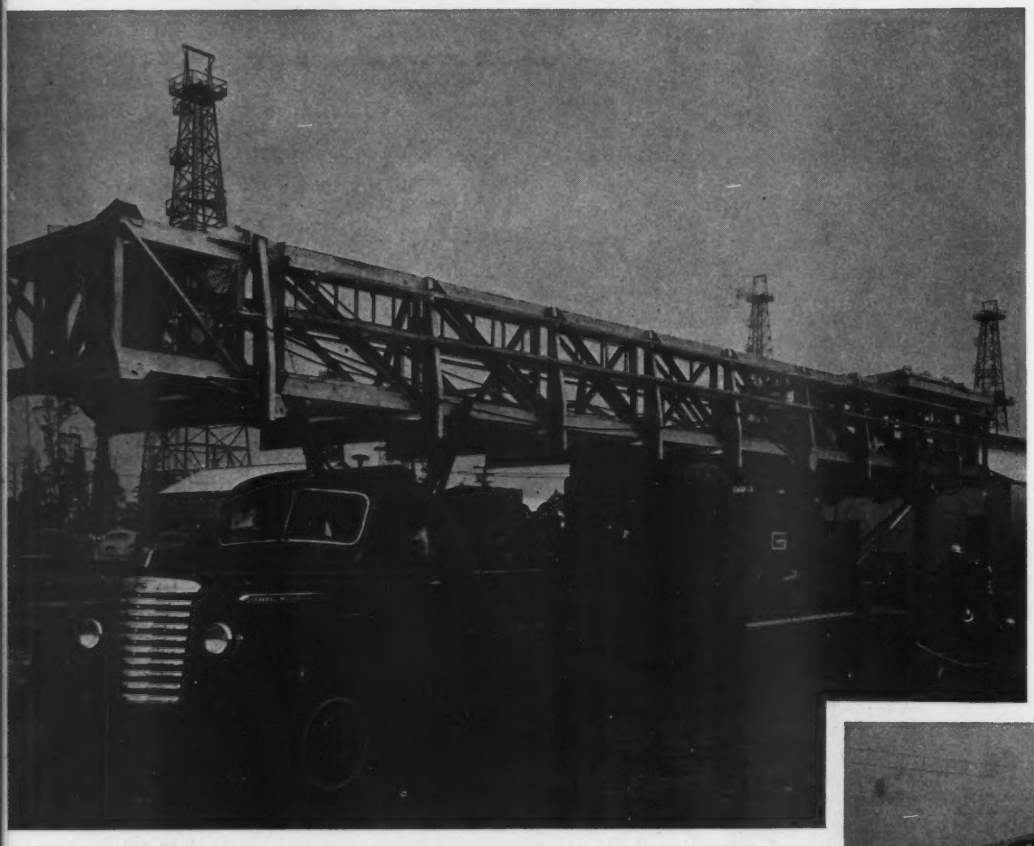
B. High tension wires **out of conduit,** same engine, original plug gap = .016" after 9 weeks continuous operation:

Cylinder	A C Tester	Gap
1	5	.033
2	5	.044
3	5	.044
4	5	.040
		.121 ÷ 4 = .040"

.040" — .016" = .024" Av. point wear.

Note: In the above tests the engine load, make of plug and operating conditions were identical. No. 1 plug was nearest the magneto and No. 4 plug farthest from the magneto.

HOPPER BLITZ-RIG *with the*



CONFORMS TO ALL HIGHWAY REGULATIONS IN LENGTH, WIDTH, AND HEIGHT

SPEEDS DEEP-WELL SERVICING.. ELIMINATES DEAD EQUIPMENT INVESTMENT

It won't cost you a cent to find out the facts about the new Hopper "Blitzrig," but the time-saving, new methods of deep-well servicing, lease development, and slim-hole or shallow drilling, made practical with this heavy-duty, portable equipment, can save your department thousands of dollars annually. Large investments in little used field equipment can now be returned to active service, or liquidated. New, money-saving well completion methods can be successfully employed.

Speedy transportation over state highways and lease roads, easy maneuverability, and minimum time required for set-up and take-down at the job make the Blitzrig adaptable for the widest variety of work and a time saver. The 90-foot Ideco Telescoping Mast, double-drum Hopper Hoist, Waukesha Engine, mast-erecting hydraulic cylinders, pump, winch, and controls are all mounted on a compact, electrically welded semi-trailer pulled by a four-wheel-drive type truck. It's a *complete* operating unit, with the traveling block carried in the mast, strung up and ready to work at all times.

But speed is only part of the Hopper Blitzrig story; thorough engineering, experienced designing, and knowledge, gained through years of building oil-country portable hoists, have been applied to make this modern equipment smooth in operation, safe, and capable of delivering years of economical, dependable service.

Send your name and address for complete operating and engineering data, or ask for a representative to call at your office with all the facts about this up-to-the-minute equipment.

HOPPER MACHINE WORKS
Office and Factory: Bakersfield, California
Exclusive California Distributors of Hopper Products
PETROLEUM EQUIPMENT COMPANY
2800 SOUTH ALAMEDA ST., LOS ANGELES, CALIFORNIA

IDECO

"Kwik-Lift"

90-FOOT MAST

COMPLETE PORTABILITY AND FAST ERECTION PLUS 200,000 POUND LOAD CAPACITY

From the "over-the-road" position to 90 feet high "over-the-well" in ten minutes—that's the speedy erection you get with the Ideco "Kwik-Lift" telescoping mast. Powerful hydraulic jacks lift the mast from its cradle to the 49 feet 6 inches height and tilt it into correct position, where it is locked and the four load carrying screws in the leg bases are quickly adjusted. The upper section is then raised to the full 90-foot height by a steel cable and automatically locked against any possibility of falling. Guy wires are carried attached to the mast and ready for fastening to dead men; the traveling block is already strung up, and the platforms are hinged to the mast legs so that they can be pulled into position and locked in a few minutes.

Every factor of strength, safety, time-saving, and operating convenience has been planned, worked out in practice, and proved in actual service. The whole structure is rigidly braced and welded. In the 49-foot 6-inch position the mast has a load capacity of 300,000 pounds, and a capacity of 200,000 pounds when extended to 90 feet. Pipe racking capacity is: TUBING—13,000 feet 2½-inch external upset; 8,700 feet 3-inch external upset. DRILL PIPE—3,200 feet 5-9/16-inch; 4,600 feet 4½-inch; 7,000 feet 3½-inch.

Call your Ideco representative for full details.

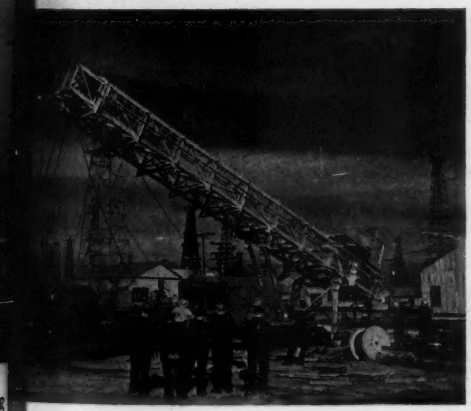
"KWIK-LIFT" MASTS

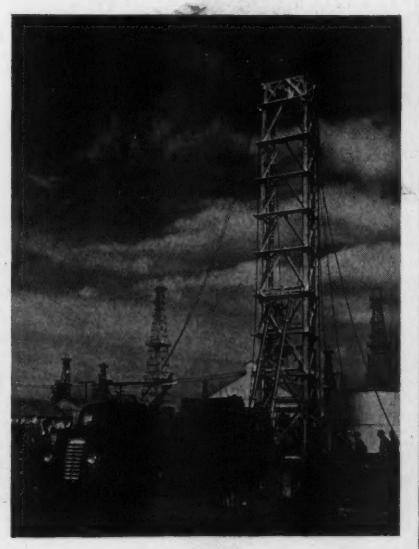
Manufactured by

INTERNATIONAL DERRICK AND EQUIPMENT COMPANY

of California

TORRANCE CALIFORNIA



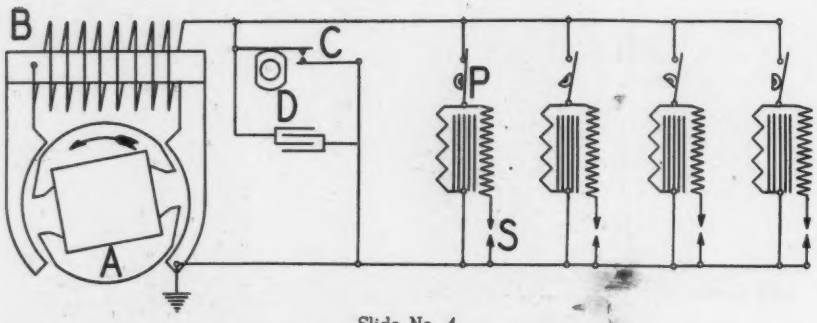


Left—Backed into position at the well. Note hydraulic cylinders.

Above—Raising mast from horizontal position.

Right Above—Mast at 49-ft. 6-in. position. Load capacity at this height is 300,000 pounds.

Right—Pulling full stands of tubing from a deep well. Speed, safety, and operating convenience are combined with real money-saving when using this modern equipment.



Slide No. 4

jump the gap to the tank. This problem has long been recognized by oil company electrical engineers.

Why do the stray sparks cease when our high tension leaks are enclosed in conduit? The metal conduit absorbs the magnetic field before it can get to the engine frame and induce a current there. Why do the plugs burn out? The high tension lead and the metal conduit are the two plates of a condenser. This condenser stores up electrical energy and then releases it when the spark is produced at the plug. The result is that the spark is hotter and of longer duration than necessary. This not only burns out the spark plug in a hurry but puts a heavier duty on the magneto than is necessary. The longer the lead and conduit the greater is the capacity of the condenser and the more pronounced the effect. This same effect is noted on leads out of conduit because the lead and engine frame act as a condenser but the capacity and hence the magnitude of the effect in this case is only a small fraction of what it is in the case of the conduit.

Why is the low tension magneto so satisfactory? Simply because it reduces those long high tension leads to a minimum and thereby minimizes the phenomena they produce.

And now one more question. Couldn't these stray sparks be due to static electricity? The answer is that possibly they could but probably they aren't. Static sparks are drawn to ground from an insulated conductor which has an accumulation of charges on it. We know that static charges can be caused to accumulate in many ways. The filling of a truck or tank with gasoline or oil or the passage of gas through a container will do the trick. But static charges leak off rapidly in wet weather and slowly in dry weather. For this reason static sparking is an uncertain thing. It is therefore reasonable to expect that if these stray sparks on gas engines were due to static they would occur irregularly. One investigation on this particular point, using an instrument operating on the stroboscopic principle showed that sparks jumped every time the magneto fired. This seems to be rather conclusive evidence that the sparks aren't static and it also offers good support for the theory which has been here presented.

Here are some questions which haven't been answered:

Why can you draw sparks between power cylinders on many of the angle type units and not between the power cylinders of the horizontal units? Has parallelism of ignition wires on angle units vs. non-parallelism of ignition wires on horizontal units anything to do with the question?

Why don't all makes of angle units exhibit the stray spark phenomenon?

Why, in the two cases of spark plug wear cited, does plug wear increase with the length of high tension wire until the farthest plug is reached, and then show a slight decrease?

Perhaps some of you here can furnish us the answers.

In conclusion may I say to you gentlemen that I am not posing as an expert on the matter of electrical ignition phenomena. The C.N.G.A. Gas Engine and Compressor Committee and the Program Committee decided that this subject would be of interest and I drew the assignment of gathering and writing up what could be found. In this regard, I should like to give due credit for information received to other members of the committee and to several men and organizations associated with the industry.

New Orcutt Well Pumps 100 Bbls. Daily

Union Oil Co.'s last well in the old Santa Maria-Orcutt field, Cal-Coast No. 19, is successfully on production at 100 bbls. a day from 380 ft. of formation open to 4041 ft. after finding the deeper zones barren to 5676 ft. Gravity of the oil averages better than 24 and the water content approximates 40%.

New speedometer shows distance required to stop a car and may be set for wet or dry roads.

THE SPIRIT OF 76

by JOHN CLINTON

* * *

I like to remember my dad. He was a pink-faced chap with curly white hair, and the neatest, except on Saturday afternoons!

* * *

Saturday was car-greasing day, and he'd disappear under our old 1911 Ford with a can of goo and a little wood paddle to fill the grease cups. Then for an hour or two the air was filled with snatches of hymns, cuss-words and grunts! He had a swell time. But oh boy! You should have seen him when he emerged!

* * *

My dad would have liked Stop-Wear Lubrication that today you can get at any Union Oil station. Particularly since dad liked things he could see or hear or feel. And it happens you can do all 3 when Union Minute Men give your car a Stop-Wear Lubrication.

* * *

You can see the difference in the way the old bus shines when the boys bring it back—glass bright, tires and running boards dressed, interior cleaned out neat as a pin. And you can feel the difference in the way it rides, shifts and steers.

* * *

And finally, you can *hear* the difference. Not a squeak, rattle or noise. The whole thing's about as satisfactory as anything I've ever tried.

* * *

Well, as I say, I think dad would have liked Stop-Wear Lubrication, even if it would have prevented him from having himself a lot of fun Saturday afternoons. And, finally—if you've never tried Stop-Wear Lubrication, you're missing something. Drive in to or telephone your nearest station, and see what I mean.

UNION OIL COMPANY

New Type Spark Plug Rig Proves Effective

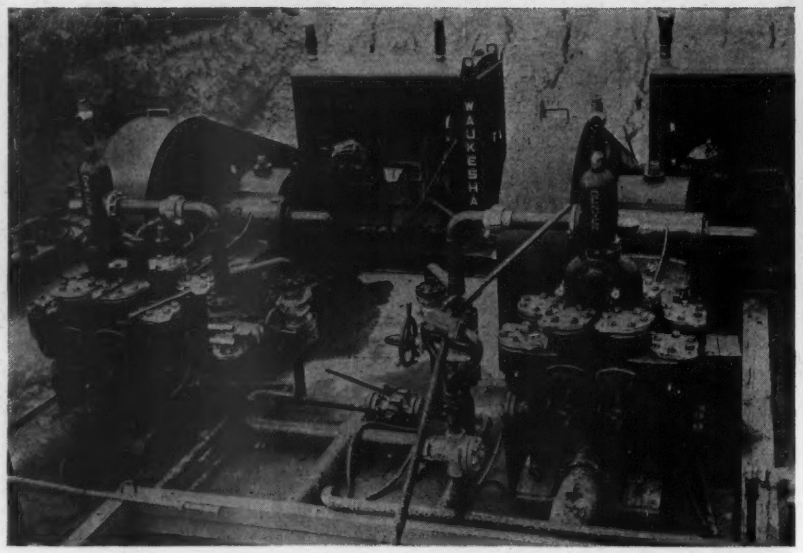
In Hard Rancho San Francisco Rock

With R. S. F. No. 18 on production as a small but satisfactory well in the northeasterly section of the field, chief interest at Newhall-Potrero is now centered in No. 19 which is being drilled with a big new sparkplug rig. Now near the end of its maiden voyage, the outfit made 6200 ft. of hole in its first 35 days which is not at all bad for the hard formations here encountered.

To compete in hoisting and drilling work with heavy duty steam rigs, it is evident that input close to 1000 H. P. must be handled with ample service and safety factors to insure long and trouble-free service to the operator. Fundamentally this is accomplished by the use of a large drum, ample brakes and heavy duty bearings, used in conjunction with high strength, well-lubricated chain drives. In addition, it becomes necessary to incorporate many convenient and labor-saving features which reflect speedy and efficient operation at all times. By

At right, John Cox, Roy Turner, O. L. Brown, L. M. Combs, and Ken Matteson, are putting down Barnsdall's No. 19 at Rancho San Francisco. Below is the power plant and transmission view of the spark plug rig.

Rancho San Francisco No. 19 is as neat in appearance as a freshly washed traveling block. Below, a view of the mud pump setup.



use of air-operated friction clutches and a novel arrangement of power transmission in this drawworks, it has been possible to supply the demand for a hoist which can be used with multicylinder engines on heavy drilling jobs which can profitably use more power than is ordinarily associated with this type of rig.

This Ideal 125 consolidated drawworks is built in two sections to facilitate handling and to make it possible to transport easily on the highways. One section contains the six speed transmission and catshaft while the other is made up of the drumshaft and controls. Both sections clamp together to form a rigid, compact unit. When separating the two sections it is necessary to break only two chain drives, both of which are outside of the bearing supports and are easily accessible.

The grooved drum is 28 inches in diameter and 42 inches wide, providing ample spooling capacity for use with the tallest derricks, while braking power is provided for by the use of the K-54 compound equalizing brakes. Power is delivered to the drumshaft from the transmission through a twin double chain drive which is used for all six primary speeds. The drumshaft clutch is the air-operated Ideal 36 inch multiple disc clutch conveniently mounted outside of the bearing support on the driller's side. A double 40 inch hydromatic brake is connected to the drumshaft by a gear-tooth clutch coupling.

The transmission is the six speed chain driven type employing triple strand chain, while the two reverse speeds are obtained through constant mesh helical gears. Simplicity and ruggedness are maintained in the transmission by the use of hardened step-jaw clutches which provide direct and positive drives regardless of the speed selected. The entire transmission is completely enclosed and all working parts are

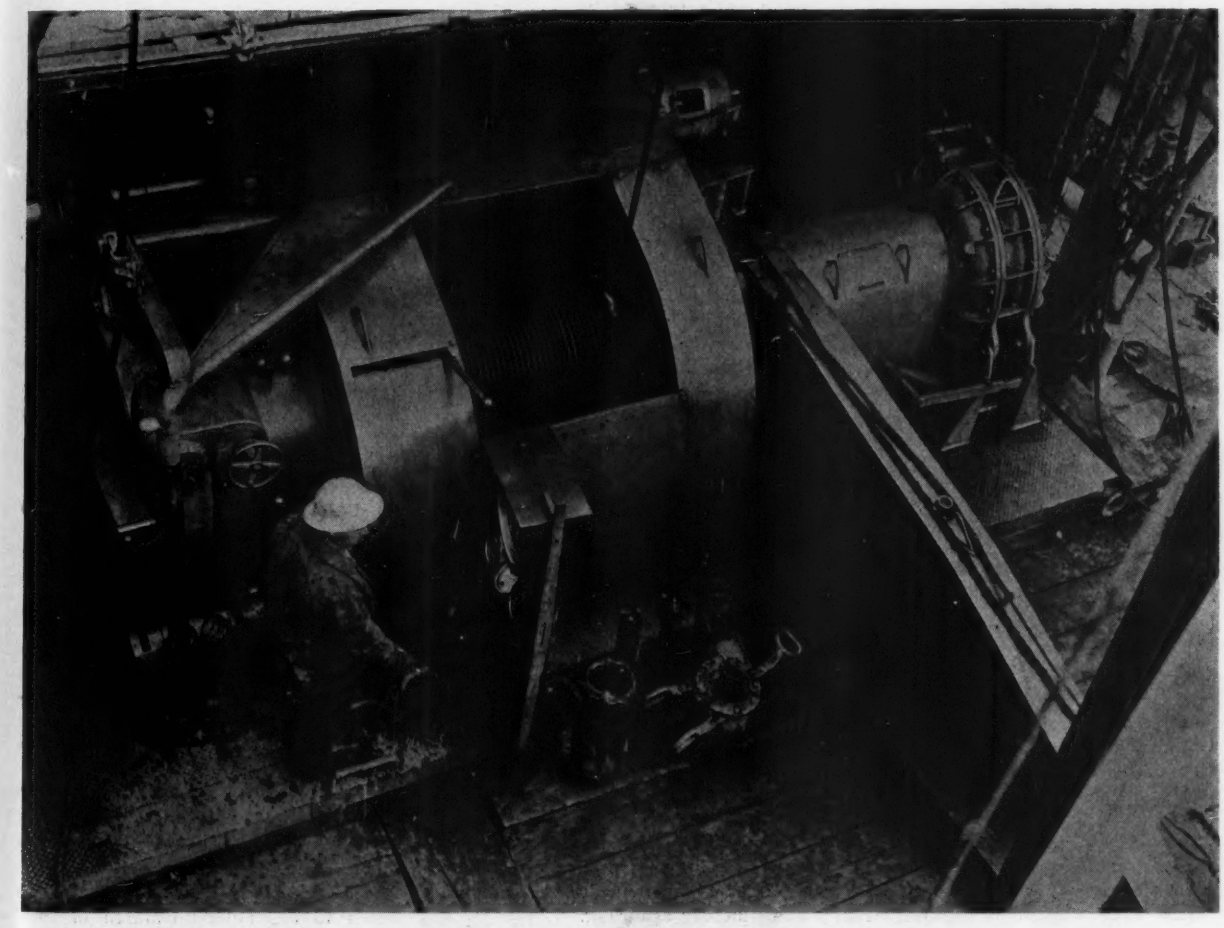
continually sprayed with oil to insure long life and quiet operation. Two chain drives, both of which are completely enclosed and oil bath lubricated, transmit power from the transmission case to the drumshaft proper, one being the hoisting drive and the other the "empty block" and rotary drives. The rotary drive is connected to the rotary table through a roller bearing double idler sprocket on the drumshaft. The arrangement makes it possible to obtain six rotary speeds, providing a greater range of efficient speeds and increasing the flexibility of the machine.

Due to the nature of mechanical rigs and power characteristic of internal combustion engines, an objectionable feature has been the inability to quickly transfer from a low to a high speed on the drawworks drum when going in the hole with drill pipe, that is, a low speed is required for picking pipe up to release slips and a high speed is then immediately required for taking up empty blocks.

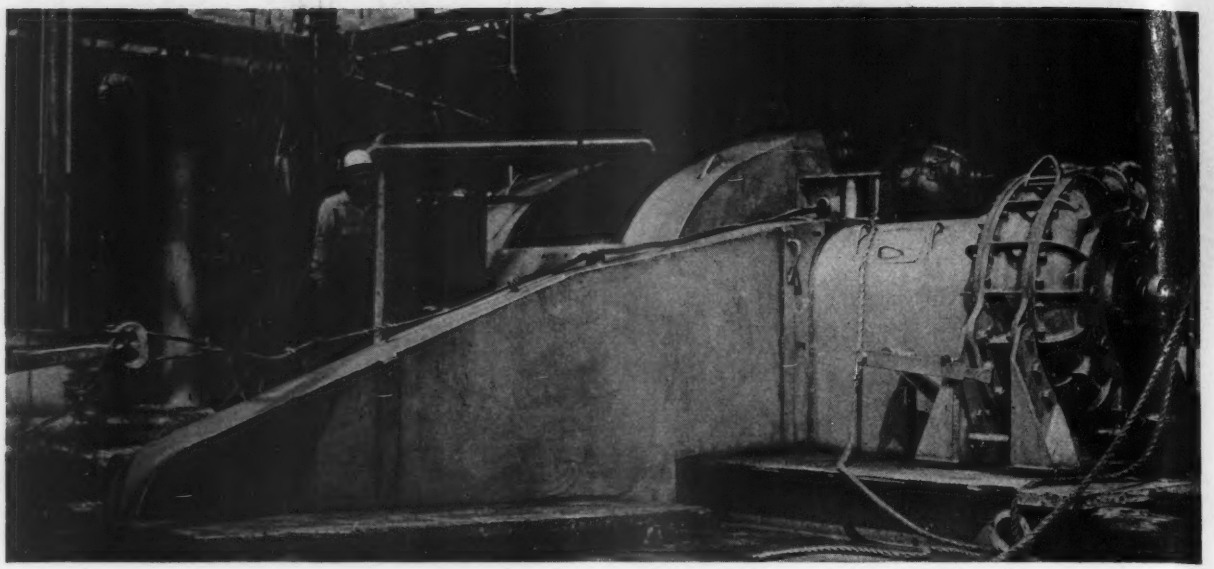
By the use of the above mentioned gear coupling and quill sprocket on the drumshaft, the rotary drive from the transmission on this rig may be selectively connected to either the rotary or drumshaft proper. This arrangement therefore makes it possible to provide a high speed "empty block" drive on the rotary side, while a low speed is immediately available on the driller's side. A lever at the driller's position is used to select this high drive when going in the hole, after which two foot pedals control the air operated friction clutch for both the high and low speeds. When coming out of the hole all or several of the six speeds of the primary drive may be used progressively for the hoisting operations, while the rotary drive remains coupled for the usual rotary table operations of "rotating out".

On the main drives the usual sliding clutch keys have been eliminated, giving increased strength to the shafts concerned. The 9¾ inch diameter drumshaft is further protected by the use of sleeves and inner bearing races which remove all moving parts from contact with the shaft and thus eliminate wear from this very important part. The drumshaft and lineshaft sprockets are mounted on roller bearings to insure true running and minimum wear.

This installation is powered by two 350 H. P. Waukesha engines driving the drawworks through a twin double chain drive which is engaged by the air-operated master



Looking down on No. 19's drawworks.



And here is a side view.

friction clutch controlled from the throttle hand wheel. Thus it can be seen that all of the active clutches are air operated where quick and simple action is desirable, while the transmission clutches which are not used so often are the dependable step-jaw type, manually controlled. All air clutches may be manually controlled in the event of an air supply failure.

●

Standard Advances Crude Oil Schedules

The Standard Oil Company of California announces, effective at seven a.m., April 24, 1941, a readjustment and general increase in the prices it offers for its purchases of crude oil at the well. The advances range from one cent to thirteen cents per barrel. The changes affect both northern and southern California fields. The company also announces an increase in the price of all grades of gasoline of one-half cent per gallon effective at the opening of business April 24, 1941, throughout the Pacific Coast states, Alaska, and Hawaii.

Argentine Engineer Addresses Nomads

An innovation at the regular monthly dinner meeting of the Los Angeles Chapter of Nomads held in Los Angeles April 9 was a short address in Spanish by Juan A. Castro of the Yacimiento Petroliferos Fiscales, Argentina. Bart Gillespie introduced the speaker and gave a brief translation of his talk upon its completion. At each meeting of the Los Angeles Chapter hereafter similar talks will be given in a foreign language by representatives of oil companies in various countries throughout the world.

This first address in Spanish went over big with the members present, many of whom were able to understand in varying degrees what was said. This is another move to stimulate interest in learning the language of countries which will be visited by Nomads in their journeys to foreign fields in the interest of American oil tool export.

The speaker of the evening was Roy Kempley who is a crack rifle shot and who exercised his talent while hunting in the interior of Alaska. Starting from Anchorage, he and his wife, accompanied by a white Persian cat, were flown into the Rainy Pass region west of Mt. McKinley where they were left for six months to hunt moose, caribou, bear and wolves. Motion pictures covering in sequence the entire trip were shown.

Conservation Group Denies Heavy Oil Bid

The Conservation Committee of California Oil Producers voted to continue its customary method of allocating crude oil production at its meeting April 22, rejecting the recommended plan to increase the allocation to heavy oil which was submitted last week by its Allocation Committee.

Joseph Jensen, chief petroleum engineer of the Tide Water Associated Oil Co., presented the case for the recommended plan, but withdrew his support when it was apparent that the committee was generally against it.

Opposition to any change in plan was voiced by representatives of San Joaquin Valley fields, who based their objections generally on the statement that there did not appear to them to be any great demand for heavy oil, at least not enough to justify a change in the uniform program which has been operating satisfactorily for the past two years.

The state quota was held to the same figure for May as during the current month—571,000 barrels per day, with a reduction of two barrels per day in the top allotment, to 142 barrels daily, and a further reduction in the allotment to intermediate wells, which will make room for a net addition of 4,586 barrels daily from new wells and recompletions.

Stokes Sidetracks Cable Tool Fish

L. E. Stokes, using light rotary equipment, sidetracked the cable tool fish in the old Swartout Oil Co. core hole in the hills back of Summerland and is drilling ahead below 1000 ft. Located in sec. 1,4-26, the well is an attempt to find production in the sands from which Summerland derives its water supply. At present, considerable oil must be skimmed from the reservoirs before water can be piped into the city.

The motor bus and improved highways have brought modern schools within reach to 3½ million children in rural areas.

Field Development

Los Angeles Basin

Athens Outpost Pumps 45 Bbls. Daily

Southern California Petroleum Corp.'s Howard Townsite Owners No. 1 near the corner of 122nd St. and Vermont Ave. appears to be in the same class as the El Rey well at the corner of Imperial Highway and Western Ave. Both are good for about 45 bbls. a day on the pump. Drilled to 8375 ft. and plugged to 8115 ft., H.T.O. No. 1 produces two intervals below 7960 ft. Gravity of the oil is relatively high, averaging 33 degrees but the cut remains close to 10.0%.

Rankin & Williams recovered all the drill pipe from their wildcat at 122nd St. and Main St. and are preparing to core ahead from 9100 ft.

Hiles Extends Dominguez Field

The most important extension of the Dominguez field since the Havenstrites brought in Larronde No. 1 was made recently by Hiles Drilling Co. when it completed Grant No. 1 near Walnut and Main Sts. for between 1500 and 2000 bbls. of clean oil a day. Flowing through a 38/64 in. bean, present production is 1000 bbls. of 32 gravity clean oil a day and 750,000 cu. ft. of gas. The cut is less than 1.0%.

Credit for the strike belongs to Ed Hiles and Walter Crawford who formed the company to take over the well drilled by Gus Pongratz Oil Co. at the west flanks of the field and abandoned early last year at 7660 ft. Only a short interval at the top of the Seventh Callender zone carried oil but though the saturated horizon was thin, Hiles and Crawford were much impressed with its apparent quality. The new owners plugged to 7235 ft. and cemented 6⅝ in. casing at 7200 ft. but water shutoff could not be effected. A whipstock was then set at 6000 ft. and the hole redrilled directionally to the southeast, stopping in oil sand to avoid suspected bottom water trouble. A 4¼ in. liner including 35 ft. perforated was run to the new bottom at 7255 ft. and cemented through perforations at 7219 ft. With 2½ in. tubing hung at 7200 ft., only a few runs of the swab were required to bring the well in as

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Athens	Rankin & Williams	1	7, 3-13	9098	Rec. d.p. Idle
	Barnsdall Oil Co., Honor Rho A-17-1		5, 4-16	4096	Drilling
Castaic	Collins Oil Co., Explor.	1	8, 4-17	1350	Cleaning out
	Hathaway Co., Ram	1	31, 5-17	2594	Pumping
	Jasper, Fred S.	1	17, 4-17	415	Idle
	Morse-Mangold, Inc., McDermott	1	26, 5-17	1080	Drilling
	Western Gulf Oil Co., Lechler	2	31, 5-17	2700	Drilling
	Worland Oil Co., Jenkins-Owens	1	18, 5-16	2940	Idle
Dominguez, West	Hiles Drilling Co., Grant	1	29, 3-13	7660	Completed
El Segundo	Angle, Don & Assoc., Pacific Land & Title	1	19, 3-14	7865	Prep. to redrill
Malibu	Sovereign Oil Corp., Malibu	1	7, 2-18	5650	Idle
Newhall	Aztec Oil Co., Sanborn	1	6, 3-16	1980	Drilling
	So. Calif. Drlg. Co., Needham	4	13, 3-16	4398	Idle
	The Texas Co., Whitnah	1	14, 3-16		Rig
Redondo	Cherokee Oil Co.	1	32, 3-14		Grade
	Pettijohn, J.E., Dominguez Estates	1	5, 4-14		Grade
Whittier-La Habra	Sierra Pet. Co., Cole	1	2, 3-11		Grade
	Orange County				
Costa Mesa	Thompson, Milton N., Banning	1	9, 6-10	5649	Cleaning out
Kraemer	Valley Petroleum Co., Kraemer	1	25, 3-9	2755	Running casing
Olive	Tide Water Assoc. Oil Co., Olive-Orange	1	19, 4-9	3705	Drilling
	San Bernardino County				
Carbon Canyon	May, Homer, Oasis	1	31, 2-8		Rig
Chino	Prado Oil Corp., Lamp	1	31. 2-7		Rig

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Contra Costa	Lafayette Oil Co., Morris	1	28, 1n-2w	180	Drilling
Humboldt	Daly, M. B., Jr.	1	2, 1n-2e	900	Idle
Merced	Don Pedro Oil Co.	1	9, 6s-9e	1906	Idle
Mendocino	Keyt, N. F.	1	3, 12n-17w	516	No report
Monterey	Loma Grande Oil Co., Corey	1	23, 24s-10e	3915	Idle
	Priest Valley Pet. Co., Greve	1	22, 20s-12e	2885	Idle
Rio Vista	Amerada Pet. Corp., Kuhn Comm.	1	8, 3n-3e		Grade
	Amerada Pet. Corp., J. F. Wilcox	1	31, 4n-3e	4209	Shut-in
	Standard Oil Co., Orland	1	9, 3n-3e		Grade
Sacramento	Portable Drlg. Equip & Supply Co.	1	35, 8n-4e	75	Drilling
San Joaquin	Standard Oil Co., Blewett	2	25, 3s-6e	3930	Drilling
San Mateo	Ra-Lite Petroleum, Inc., Bell	5	16, 7s-4w	1200	Idle
Yuba	Wright, L. G., Cox	1	18, 14n-5e	1795	Idle

one of the most sensational in the Los Angeles Basin.

One location to the south, Hiles and Crawford plan to drill a new well under the name Crawford & Associates. Union Oil Co. is already under way with an offset to Grant No. 1 on its Austin lease.

Old Julian Well To Be Redrilled

A new concern, planning to redrill and test shallow showings, headed by Chas. Stone has erected a steel derrick over the abandoned wildcat south of the Standard Oil Co. tank farm at El Segundo. Drilled originally many years ago by Julian Petroleum Co., the hole was carried to the schist at 7865 ft. by Sunset Oil Co. during the El Segundo boom in 1937.

O'Donnell to Test Upper Torrance Zone

Preparatory to testing the upper sands comparable to the Ranger zone, J. E. O'Donnell has cemented 6⅝ in. casing at 3415 ft. in his No. 74 on the west shore of the frog pond north of State St. and west of Figueroa. The well is interesting because many wells were drilled to the Del Amo zone below 5000 ft. in this area during the boom of three years ago without making adequate tests of the shallower horizon which recent developments east of Figueroa St. now indicate has possibilities.

South of State St. and east of Figueroa, De Marsh Oil Co. completed Phillips No. 1 in the interval 3518-3760 ft. but no production gages were available at press time.

Valley Pet. Tests Kraemer Outpost

Valley Petroleum Co. is testing its East Richfield outpost, Kraemer No. 1 after landing a combination string on bottom at 2755 ft. and cementing through perforations at 2100 ft. The well is located on the north flank of the field not far from the Congress Oil Co. well which was drilled four years ago.

Hathaway Completes Oak Canyon Pumper

Pumping at a gross rate of 200 bbls. a day, Hathaway Co. completed its Ram No. 1 at Oak Canyon from 184 ft. of Modelo formations open to bottom at 2594 ft. The well was slow in cleaning up and when last reported the fluid contained a high percentage of mud and water which had been lost to the sands while drilling. Ram No. 1 is located south and west of Western Gulf Oil Co.'s discovery well, Lechler No. 1 in sec. 31,5-17, which produces 35 bbls. a day from 2400 ft.

Lechler No. 2, north and east of No. 1, is drilling below 3450 ft. after finding the sands about 50 ft. lower and all gray. The well now seeks a new deep zone.

Drilling Suspended In Malibu Wildcat

Drilling has been suspended at 5650 ft. in Sovereign Oil Corp.'s Malibu No. 1 on Point Dume. Bottom formation is reported as San Onofre Breccia.

Texas Co. to Drill Third Near Elwood

Taking advantage of knowledge gained from two previous tries in the immediate area, The Texas Co. is preparing to drill No. A-3 on its large Bishop holdings north of the east end of the Elwood field. Location is given as 1135 ft. north and 1600 ft. east of the intersection of the Coast Highway and Glen Road in sec. 13,4-29. Production will be sought

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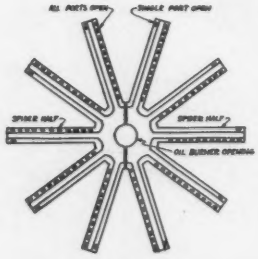

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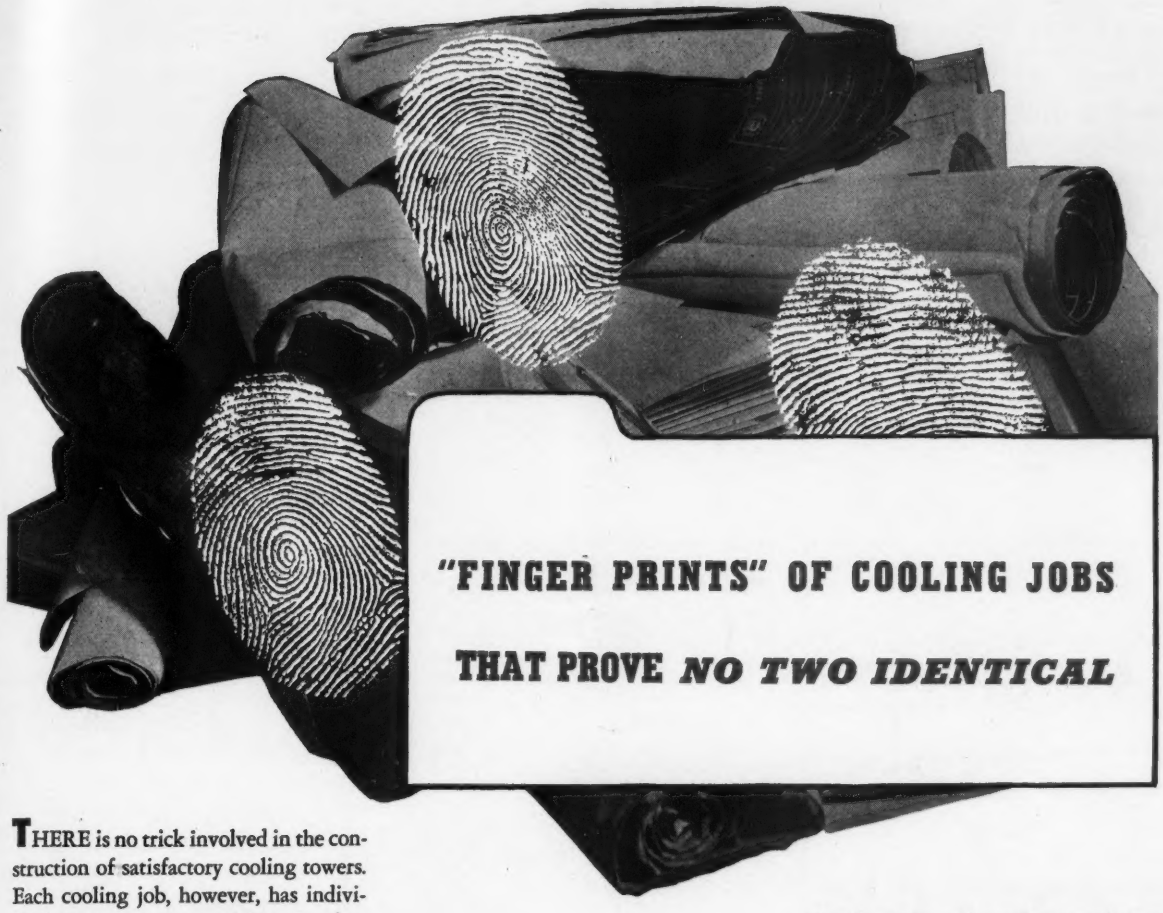

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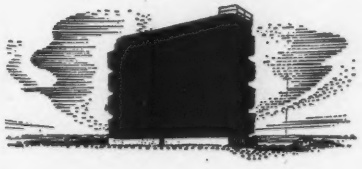

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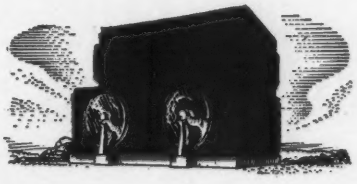

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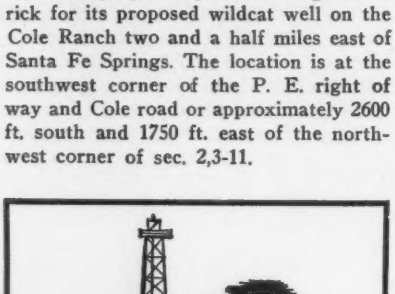
in the Vaqueros which is near the 3000 ft. level in this locality.

Sierra to Drill East of Santa Fe

Sierra Petroleum Co. has removed walnut trees preparatory to building a derrick for its proposed wildcat well on the Cole Ranch two and a half miles east of Santa Fe Springs. The location is at the southwest corner of the P. E. right of way and Cole road or approximately 2600 ft. south and 1750 ft. east of the northwest corner of sec. 2,3-11.



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Aztec Oil Drills Newhall Wildcat

Playing for a fault accumulation on the north flank of Pico Anticline, Aztec Oil Co. is drilling Sanborn No. 1 below 2140 ft. in sec. 6,3-16. Nearing the Pico-Modelo contact, the well has showed oil and gas below 1980 feet.

The Texas Co. is rigging up Whitnah No. 1 in sec. 14,3-16 near the old Tunnel area.

"Dick" Pence Called For National Defense

Richard H. Pence, for many years associated with the Conservation Committee of Calif. Oil Operators and its predecessor the Oil Umpire's office, has received orders to report for duty at the Long Beach Naval Commandant's office on May 5, 1941. Mr. Pence holds a Lieutenant's commission in the U. S. Naval Reserve.

Northern Fields

Loma Grande Drills Monterey Wildcat

Loma Grande Oil Co.'s Monterey county wildcat, Corey No. 1 in the East Pleyto-Bradley area, is drilling in brown shale at 3915 ft., according to latest reports. The project is located in sec. 23, 24-10.

Amerada Completes Slim Hole Gas Well

Cementing 3 in. casing on bottom at 4209 ft. and gun-perforating from 4185 to 4190 ft., Amerada Petroleum Corp. completed its latest Rio Vista gas well, J. F. Wilcox No. 1 as a super slim-hole job. A production test was not made immediately after the mechanical completion. Contractor Ned Brown of Long Beach drilled the well with a new portable rig spudding March 18th and finishing April 8th.

Amerada's next well, Kuhn Community No. 1, will be drilled in sec. 8,3n-3e. Standard Oil Co. is grading for Orland No. 1 in sec. 9 of the same township.

Tracy Well Tests At 6800 mcf Rate

Standard Oil Co.'s Blewett No. 2 in the Tracy gas field is deepening at 3930 ft. after making a formation test from 3845 to 3900 ft. which resulted in a gas blow estimated at 6,800,000 cu. ft.

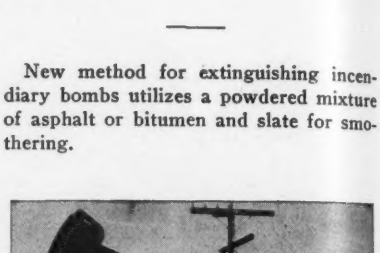
Harkness Spuds Sacramento Well

Tracy Harkness of Bakersfield, operating under his firm name of Portable Drilling Equipment & Supply Co., has spudded a wildcat well in sec. 35,8n-4e near Sacramento.

Del Mar Oil Spuds Santa Barbara Well

After a long delay because of adverse weather conditions, Del Mar Oil Co. has spudded in its Rowe No. 1 in sec. 11,4-28 west of Santa Barbara. When last reported, drilling was progressing below 230 ft.

New method for extinguishing incendiary bombs utilizes a powdered mixture of asphalt or bitumen and slate for smothering.



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San Joaquin Valley

Texas Co. Abandons Latest Cantua Try

Hope that commercial production might be found in the Cantua Creek area of Fresno county was dimmed when The Texas Co. abandoned S.P. No. 27-13 after a final test at 9365 ft. recovered only salt water.

Drilled to 9673 ft. in the southwest corner of sec. 13,17-15 the well was tested at intervals from bottom with no encouraging results. Sole reported success was an estimated 1,000,000 cu. ft. of gas which blew with a 1200 bbl. flow of salt water from 9380 ft.

Located a half mile northwest of the company's S.P. No. 1, which flowed a small amount of condensate, salt water and gas from 9413 ft., the latest try was an attempt at finding the productive closure believed present in the area.

The abandonment will be remembered as the 15th such monument to the general belief that such an entrapment exists. Depths of the previous trys have ranged down to 12,000 ft. and have blanketed a large part of the area known as Cantua Creek.

Showings were found in nearly all of the preceding holes and the current failure does not preclude a possibility that production may yet be found somewhere in the district.

Shell Finishes Mt. Poso Pumpers

In line with the present program of developing all possible heavy oil production to meet increasing demands for this type of oil, several companys have finished Mt. Poso development wells recently.

Latest of these is Shell Oil Co.'s Security No. 24 in sec. 12,27-28 at the west flank of Mt. Poso proper, which was finished from 2005 ft. in Vedder sand pumping clean 15.5 gravity oil at a 300 bbl. rate. Also completed are Security No. 25 from 2085 ft. for 185 bbls. and Security No. 26 for 230 bbls.

In the northeast quarter of sec. 4, 27-28, J. J. Tavis is seeking an accumulation between the Mt. Poso field proper and an isolated pool in the north half of sec. 3. Last reported at 1523 ft. the well was preparing to core for the Vedder.

South of Mount Poso in another accumulation formed by a cross fault on the main Poso Creek fault, Vanguard Oil Co. finished Baker No. 12. Located in the northeast quarter of sec. 33,27-28, the well pumps a 150 bbl. rate from the Vedder at 1756 ft.

Also preparing to enter the area is General Petroleum Corp. with foundations poured for Heisen No.'s 6 and 35 in the south half of sec. 16,27-28.

McClung Area Try Nears Objective

Union Oil Co.'s KCL No. 31-3, a Vedder try in sec. 3,30-26 was last reported at 10,157 ft. Located on a structure southeast of the Rio Bravo-Greeley fields the current try is the latest of several deep explorations all of which found the objective sands barren near 11,125 ft.

On the northeast flank of the area, Ohio Oil Co.'s KCL No. G-1 in sec. 36, 29-26, is drilling with last depth reported at 5281 ft.

Belridge Wildcat Resumes Drilling

Santa Mora Trust's well No. 1 is deepening at 960 ft. after rigging a new derrick which replaced a wooden one lost in recent high winds. Located near the north quarter corner of sec. 10,28-20, the well seeks relatively shallow production.

West Belridge Oil Co. is holding operations in abeyance pending the outcome of the current well. The company plans to drill in the center of the southwest quarter of sec. 3,28-20.

Buttonwillow "Cat" Runs Protection Pipe

The Texas Co.'s S.P. No. 47-15, current try at a productive closure at depth in the Buttonwillow area, was last reported at 8933 ft. with a string of 8⅝ in. protective casing standing cemented.

Located in sec. 15,29-24, the well seeks production suggested by showings in two earlier deep trys; California Exploration Co.'s Salisbury No. 1, a 12,989 ft. hole in the northwest corner of sec. 7,29-24 and Union Oil Co.'s Bowerbank No. 1 which carried to 12,144 ft. near the west quarter corner of sec. 23,29-24.

Each of these wells found several horizons which appeared possibly productive but formation tests in each case proved the sands too tight to afford a reservoir for accumulation.

Deep Rincon Well Looks Encouraging

Hobson No. C-9, Chanslor-Canfield Midway Oil Co.'s deep test at Rincon, appears now to have an excellent chance of opening up at least one new zone. With casing cemented at 7539 ft. and bottom at 7802 ft., a 4½ hour formation test was made with 1300 ft. of water

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
	Fresno County				
Cantua Creek	The Texas Co., S. P.	27–13	13, 17-15	9673	Abandoned
Raisin City	Shell Oil Co., Properties, Inc.	8–18	18, 15-18		Rigging up
	Kern County				
Belridge—South	Santa Mora Oil Co.	1	10, 28-20	960	Drilling
	West Belridge Oil Co.	1	3, 28-20		Location
Buttonwillow	The Texas Co., S. P.	47–15	15, 29-24	8933	Drilling
Devils Den	Herzog, R. D., Collins	1	26, 25-18	361	Idle
	Herzog, R. D., Marine	1	26, 25-18	708	Idle
Edison	Crude Oils, Inc., S. P.	7	31, 29-30	460	Idle
	Kern Valley Drlg. Co., Williams	1	30, 30-30	700	Idle
Famosa	C.C.M.O. Co., Famosa	12–1	12, 27-26		Location
Grapevine	Continental Oil Co., Tejon	A–1	28, 11-19	503	Drilling
	Kern Line Oil Co.	1	19, 11-19	8390	Rigging up
Lost Hills	Tide Water Assoc. Oil Co., Isolis	46	16, 27-21		Location
Maricopa	Bankline Oil Co., Well	24–24	24, 11-23	3104	Re-drilling
McClung	Ohio Oil Co., KCL	G–1	36, 29-26	5281	Drilling
	Union Oil Co., KCL	31–3	3, 30-26	10157	Drilling
Richgrove	Borget, A. J., Kendall	1	16, 25-27	1700	Idle
	Shell Oil Co., Smith	77–11	11, 26-27	2424	Abandoned
	White River Expl. Co., Salsa	2	8, 25-28		Rigging up
Shafter	Continental Oil Co., KCL	C–2	35, 27-24	11349	Redrilling
	Kings County				
Kettleman So. Dome	Bristol Oil Co., Smith	1	35, 24-19	8054	Stdg.plug.—1729
Pyramid Hills	Pyramid Prod. Co., Spreckles	2	16, 24-18		Rig
	Tide Water Assoc. Oil Co., West Slope	76	20, 24-18	145	Drilling
Reef Ridge	Easterbrooks, S. F.	1	11, 23-26		Location
	Tulare County				
Terra Bella	Arnold, V. F., T.B.I.D.	1	5, 23-28	275	Idle

cushion in the drill pipe. A good gas blow was noted at the surface and net recovery was 32 stands of nearly clean oil and nine stands of oily mud. No free water was in evidence. Deepening is now in progress below 7860 ft. with formations alternating shale, shells and oil sand.

C. C. M. O.'s most recent completion in established horizons was Hobson No. B-44 which plugged back from 4850 to 4700 ft. and came in flowing 335 bbls. of 30 gravity oil cutting 5.0%.

Conoco Redrills Shafter Wildcat

After once making 11,349 ft. only to be followed by a trouble "jinx" involving twistoffs, drill pipe fish and caving hole, Continental Oil Co. is redrilling its KCL No. C-2 at 8600 ft. after milling through the casing at 8525 ft.

Hoping that the trouble is now all behind, the project seeks Vedder zone production near the northeast corner of sec. 35, 27-24. It is thought probable that 13,000 ft. of hole will be required to properly test the section.

Located on a trend extending southeasterly from the Wasco oil field the project is the latest of several drilled in the area. Vedder zone showings have been found in prior 13,000 ft. wells but none so far have found sands appearing capable of commercial production.

Shell Oil Rigging Raisin City Test

Entering the north Fresno county area, Shell Oil Co. is rigging up to drill Properties Inc. No. 8-18 in the southwest corner of sec. 18,15-18, some 15 miles southwest of the city of Fresno.

Continental Spuds Grapevine Test

Due north of the small production found in the Grapevine area near the east quarter corner of sec. 28,11-19, Continental Oil Co.'s Tejon No. A-1 is making hole after cementing 11¾ in. surface casing at 503 ft.

While located near the previously found production, the current play is for a separate accumulation of greater magnitude. The location is reported to have been thoroughly worked over by geophysical crews, whose findings are said to have been in accord with ideas formed by the use of geophysical findings and prior drilling.

In the center of nearby sec. 19,11-19, Kern Line Oil Co. is yet rigging up to resume work on well No. 1 bottomed at 8390 ft. The derrick was razed by a wind storm two months ago.

Harrison Drilling Shallow Coalinga Try

In a small pool of shallow production west of the south tip of the old Coalinga field, J. F. Harrison is drilling Diamond No. 8 with a cable tool rig. Located in the southwest quarter of the southeast quarter of sec. 35,20-14, the well was last reported at 150 ft.

Plan New Test of Famosa Area

East of the town of Famosa in the east San Joaquin Valley, Chanslor-Canfield Midway Oil Co. is preparing to drill Famosa No. 12-1 near the center of sec. 12,27-26.

First activity in an area several miles square, the well is reported financed in part by other operators holding nearby acreage. Nearest previous drilling is in the northwest corner of adjacent sec. 7,27-27 where C.C.M.O. drilled Carter No. 1 during 1937. This well was carried to a barren 5420 ft. after finding the Vedder gray at 4670 ft.

Deepest try in the area was Shell Oil

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Co.'s KCL No. A-58-8 near the south quarter corner of sec, 8,27-26, some five miles west of the present well. This test, drilled in 1938, found the basement at 9275 ft. after topping the barren Vedder at 7420 ft. and the Eocene gray sand at 8760 ft.

Two Drillers Work Edison Pool Area

In the little pool of substantial production in sec. 21,30-29, southwest of the main body of the Edison field, two strings are now working.

Sustaining operations which already have resulted in several new pumpers near 3600 ft., Wood-Callahan Oil Co. is below 2100 ft. with Magoffin No. 2.

Also drilling for the oil proved present in attractive quantity is Kenneth Oil Prod. Co.'s Bea-Eddye No. 2 now drilling near 2500 ft. This well is being drilled under contract by E. A. Bender for Lester Cutler and Peter Ochs who head the operating company.

Vendome Oil Co. is yet formulating plans to drill an offset to the new production near the west line of sec. 22, 30-29.

Standard Oil Making Deep Kettleman Test

Apparently determined to find out all about deep potentialities at the southeast tip of Kettleman North Dome, Standard Oil Co. is drilling well No. 1-1U at 11,-910 ft.

With the Eocene pegged as present over the northern and central portions of the field by successful completions from the McAdams sand by both Standard and the KNDA group, the current deep try was started in the northwest corner of sec. 1, 23-18 as the most southerly deep well in the field. The Temblor or original discovery zone was found barren by Standard's earlier test No. 54-1U near the center of the section which bottomed at 9675 ft.

Top of the McAdams sand was found in the test at 10,851 ft. but a series of formation tests to 11,377 ft. recovered only salt water with a little oil and gas. Concluding that all portions of the zone were too low to produce, the hole was cored to present bottom in fine sand. The entire lower section of the hole has contained mostly fine gray sand with a few oil stains and streaks showing fair cuts.

No announcement has been made concerning the ultimate depth of the test although it is a fair guess that unless more substantial showings are found soon the drill will be stopped.

H. L. McNally Made Westco Pump Sales Head

Micro-Westco, Inc., Bettendorf, Iowa, has just announced the appointment of H. L. McNally to position of sales manager of the Westco Pump Division. This advancement from the position of assistant sales manager resulted when Leon F. Wernentin, former sales manager, was promoted to the sales department of the Bettendorf Co., the parent organization.

H. L. McNally

Mr. McNally joined the company over sixteen years ago and steps into his present position with a wealth of practical knowledge of pump production and sales, gained through his varied experience in the factory, office and field.

No radical changes in company policies are contemplated by Mr. McNally, although he has already made the first move in a program of closer co-operation with the Westco Distributing organization, by adding two sales engineers to the office force. These engineers, C. V. Copeland and Ivor G. Morgan, will assist Mr. McNally in the promotion of both domestic and industrial turbine-type and centrifugal pumps. In California the company is represented by Westco Pump Sales Co., 318 East 3rd St., Los Angeles, and 560 7th St., San Francisco.

Standard Oil Grades Cat Canyon Location

Standard Oil Co. is grading location for Las Flores Land & Oil No. 2 which will be drilled 330 ft. north and 990 ft. west of the center of sec. 27,9-33 in the new portion of the Cat Canyon field. Only two wells at present are producing this prolific Monterey structure discovered three years ago by Standard Oil Co.

A new, economical method for piping crude oil from well to refinery converts the oil into a vapor for transmission.

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Coastal District

Alliance Completes Good Ventura Well

Flowing initially at the rate of 1707 bbls. a day, Alliance Petroleum Corp. brought in its Hartmann Ranch No. 3 on the north flank of the Ventura Avenue field. Drilled to 7641 ft. and with casing cemented at 7363 ft., the well flowed 58 bbls. per hour during a preliminary drill stem test indicating the zone was both high-powered and clean so a liner was run and the well completed. When last reported, the well was flowing steadily at 1125 bbls. a day of 32 gravity clean oil through a 40/64 in. bean with 220 lbs. on the tubing and 750 lbs. on the casing. Gas production approximated 1,000,000 cu. ft. per day, according to the company president, Lyman C. Hisey.

Adjoining the packing house on the Avenue, Alliance Petroleum Corp. is drilling Hisey No. 4 near the 5000 ft. level. In the same section of the field, British American Oil Producing Co. is drilling Hartmann No. 12 and General Petroleum Corp. is preparing a location for Barnard No. 20.

In the northeasterly sector, Lloyd Corp. is testing No. 7 after cementing casing on bottom at 9160 ft. and is drilling No. 8 at 3500 ft.

Shell Oil Co., Inc. completed Taylor No. 134 in the westerly area flowing 3178 bbls. a day from 8300 ft. Gas was measured at 2,370,000 cu. ft. Tide Water Associated Oil Co.'s latest completion was Hartmann No. 27, a deepening job bottomed at 9900 ft. which came in at the rate of 720 bbls. a day and 370,000 cu. ft. of gas.

Shell Resumes Capitan Drilling

The Capitan field on the coast west of Elwood is soon to have five new wells according to present plans of Shell Oil Co., Inc. The first of the new batch, Covarrubias No. 1-33, is already drilling and the others will follow quickly as Shell's new portable rig will make short work of this shallow drilling.

New Boom Is Seen For Santa Maria

Reflecting improved market conditions, the Santa Maria Valley field is undergoing an awakening which may develop into a new boom of no small proportions. Union Oil Co., whose activity has been steady for the past few months, is drilling two wells in sec. 27,10-34, has derrick up for Acquistapace No. 2 in sec. 22 and is grading for Stinson No. 3 in sec. 28. Deepest of the drillers is Mallory No. 4 at 5200 ft., the other, McCoy-Cooney No. 3, being near the 3000 ft. level.

In part forced by offset obligations, the Getty interests are planning four new wells which will include Geo. F. Getty, Inc. Vicente No. 6 and No. 7 in the north half of the northwest quarter of sec. 27 and Pacific Western Oil Corp. Hobbs No. 14 in the southeast corner of sec. 21 and Samarin No. 4 in sec. 27.

Signal Oil & Gas Company will drill two in the near future the first being Romalho No. 4 in sec. 27. Joseph Anderson, who now has production on a portion of the Paderewski Subdivision, plans another hole soon.

Ventura Wildcats Are Now Active

A number of wildcat wells are now active throughout Ventura county and indications are that with a continuance of good weather many more will resume work.

In Wiley Canyon, Hopland Oil Co. is down 1300 ft., while six miles to the west, F. E. Fairfield's Bardsdale well is testing with bottom at 1960 ft. and 10¾ in. casing cemented at 1070 ft.

Palma Oil Co. has derrick up for its well No. 1 in sec. 8,3-19.

In sec. 12,4-22 of the old Ojai area, Oil Production Maintenance, Inc. is planning to resume after standing idle near the 100 ft. level.

North of Piru in sec. 16,5-18, the old Richfield Oil Corp. Janes No. 1 has been cleaned out and deepened to 2857 ft. by Glen Ogles Oil Co., an Oxnard concern. South of the Santa Clara River in Eureka Canyon, Havlin & Pottenger drilled Alice No. 1, sec. 33,4-18, to 1715 and plugged to 800 ft.

Near the Los Angeles county line in the Santa Susana district, Gordon Norell has location graded for Dixie No. 1 in sec. 15,2-17.

Chob Oil Co. and Inter-Counties Fuel Co. are drilling at shallow levels in the Sespe area while Signal Petroleum Co. is preparing to deepen its Hadley No. 7 at Hopper Canyon from 2885 ft.

On the south flank of the South Mountain Field, near the old small producer drilled by Wilshire Oil Co. in sec. 19,3-20, South Mountain Oil Co. is preparing to run casing with bottom at 2770 ft.

The Crude Oils, Inc., A. B. Fletcher and Chas. P. Johnson wells at Timber Canyon are all reported temporarily idle.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
Santa Barbara County					
Elwood	The Texas Co., Bishop	A-3	13, 4-29		Location
Goleta	Del Mar Oil Co., Rowe	1	11, 4-28	230	Drilling
San Luis Obispo County					
Huasna	Tex Harvey Oil Corp., Gilmore Comm.	1	11, 32-14	4518	Idle
	Tex Harvey Oil Corp., Gilmore Comm.	2	11, 32-14	2200	Idle
Ventura County					
Bardsdale	Hopland Oil Co.	1	1, 3-19	1230	Drilling
	Fairfield, F. E., Fairfield-Filmore	1	12, 3-20	1960	Drilling
	Palma Oil Co.	1	8, 3-19		Rig
Ojai	Oil Prod. Maintenance, Inc. Byhara	1	12, 4-22	135	Idle
Oxnard	Bender, E. A., Farrell	1A	5, 1-22	7005	Idle
Piru	Nelson, D. V., P.F.C.—C.H.	1	19, 4-18	1690	Idle
	Glen Ogles Oil Co., Janes	1	16, 5-18	2857	Deepening
	Havlin & Pottenger, Alice	1	33, 4-18	1715	Stdg. plug. 800
	Oilexco, Inc., Newhall-Land	2	2, 3-18	570	Idle
	Oilexco, Inc., Stevens	1	34, 4-18	373	Idle
Santa Susana	Norell, Gordon, Dixie	1	15, 2-17		Grade
Sespe	Chob Oil Co., Phillips	1	24, 4-20	40	Drilling
	Inter Counties Fuel Co.	1A	22, 4-19	541	Drilling
	Maynard, Vaughn, Maynard	1	18, 4-19		Location
	McCaslin, W. E., Burson	1	19, 4-19	2050	Idle
	Signal Petroleum Co., Hadley	7	13, 4-19	2885	Cleaning out
South Mountain	Comstock Pet. Co.	1	17, 3-29	1800	Idle
	South Mountain Oil Co.	1	10, 3-20	2771	Drilling
Timber Canyon	Crude Oils, Inc., West	1	10, 4-20	152	Drilling
	Fletcher, A.B., Timber Canyon	3	18, 4-20	1360	Idle
	Johnson, Chas. P., Jr.	1	24, 4-21	110	Idle

THIS

LAUGH

OFF!!

Frank Vessels picked this one up somewhere:

Lawyer: "Now, sir, did you, or did you not, on the date in question, or at any other time, previously or subsequently say or even intimate to the defendant or anyone else, alone or with anyone, whether a friend or a mere acquaintance, or, in fact, a stranger, that the statement imputed to you, whether just or unjust, and denied by the plaintiff, was a matter of no moment or otherwise? Answer me yes or no."

Witness: "Yes or no what?"

He: "Did anyone ever tell you how wonderful you are?"

She: "I don't believe they ever did."

He: "Then where'd you get the idea?"

Probably thinking about that last Nomad tournament, **Ernie Fowks** remembered this one:

At the last home talent golf tourney the club secretary caught one of the entrants driving off about a foot in front of the teeing mark.

"Here!" he cried indignantly, "you can't do that. You're disqualified!"

"What for?"

"Why, you're driving off in front of the mark!"

"G'wan back to the clubhouse," he said tersely. "I'm playing my third stroke."

"Coop" Cooper ran across this one recently:

The company was on a 30-mile hike to Bakersfield. After walking for three hours the major halted a farmer and asked him:

"How far is it to Bakersfield?"

"Oh, about ten miles," replied the rustic.

After walking another hour, the major stopped another farmer, and asked him the same thing.

"I should say about ten miles," was the reply.

The body continued on its weary way for two hours, and then came to a constable.

"How far is it to Bakersfield?"

"About ten miles."

"By George," cried the major, "we're holding our own!"

Subterrex' **Harry Journeay** recently passed this story along:

A negro chauffeur had been called in the draft. He was pretty sick about it and his boss asked him what he was so down in the mouth about. After being told about the call, the boss said:

"Boy, I wouldn't feel so bad about it. You will probably get all the food you can eat, a warm, dry place to sleep, plenty of clothes, and $30 a month to spend and you won't have to work any harder than you used to on the farm."

"I know, boss, but I'm scared of this war business. I don't want any of it."

"Oh, be sensible, we are not going to war against anybody. We're just going to show them a real army so they will know better than start anything with us."

"I don't know, boss, with all this here practice they're bound to be scheduling some games!"

And **Pat O'Meara** tells this one:

Stranger at the crossroads store: "Who's the close-mouthed fellow over there in the corner? He hasn't spoken a word for the last fifteen minutes."

Another Village Loafer: "Him? That's Pod Podmore. He ain't close-mouthed, he's jess waitin' for the storekeeper to bring back the spittoon."

And **M. V. Samuels** admonishes that speech is a tricky proposition, citing the following example.

"Sorry to have kept you waiting, old man, but I've been setting a trap for my wife."

"Good Heavens! What do you suspect?"

"A mouse."

And in a similar vein **N. H. Mull** recounts:

"That fellow Jones will never succeed; he continually loses himself in his work."

"Why, I think that's an admirable characteristic."

"Not when the rest of the exploring party spends half its time looking for him."

She: "My husband is always away on business trips. What would you do in my place?."

He: "Take me over there and we'll see."

Names used on this page are entirely fictitious, and any resemblance to persons either living or dead is purely coincidental.

WEIGHT INDICATOR POINTS
It's simply good oil field economy to install the instruments on your rigs that best meet your particular control needs.
You wouldn't use a "slim-hole" outfit to drill an important deep test . . . or use a 7/8" line for a 1-1/4" line job. Then why use instruments that are not capable of accurately controlling weight, speed, pressure and torque?
Don't miss out on the savings you make with proper drilling control instruments. For complete, centralized control, it's the "Sealtite." For portable installations, it's the Martin-Decker Tool-Pusher Models—Slim Hole—Clipper—Special—and Unitized Mud Pump Gauges.
MARTIN-DECKER CORP., LONG BEACH, CALIF.

Seated, left to right, E. A. Conrad, C. H. Tuttle, T. W. Barrington, R. A. Porter; Standing, left to right, A. E. Lagerquist, W. R. Brocklehurst, W. A. Bardwell, L. E. Bushard.

Purchasing Personalities

By Leo S. Busby
Associate Editor
Southwestern Purchasing Agent

The Standard Oil Company of California

We hear a great deal these days about the preservation of our American way of life—that way of life to which all of us have become accustomed since we first learned to stand in our cribs and gaze wide-eyed at the wonderful things around us. Perhaps nothing brings back to us more vividly our earliest impressions of that manner of living than the simple pronunciation of those household words that were so intimate a part of our early lives. What almost forgotten memories may come to our minds at the mention of the names of Teddy Roosevelt, Christy Mathewson, Jim Corbett, or Admiral Dewey, and what dimly remembered boyhood experiences may live again in the words buckboard, cord-wood, chores, woodshed, hurdy-gurdy, lamp chimney, or gas jet!

Personally, there is one word which stands out more clearly than all the others in our recollection. It visualizes at once a barefoot boy in a small New England town. He has, under boyhood's most eloquent protest, "Aw, ma," quit a game of scrub (baseball, remember?) to run across lots to the neighborhood store for a gallon of kerosene. On the spout of the can sticks a tiny potato to keep the oil from spilling. The boy is righteously peeved because his mother had neglected to tell the Standard Oil delivery man to leave four of those tall, square cans instead of the usual three. To us, the name Standard is a household word from way back, reminiscent of coal oil fumes, but loaded with boyhood's cherished memories.

Perhaps you, too, have early recollections prompted by this famous American household name and in meeting the Southern California buying personnel of the Standard Oil Company of California will share with us the pleasure of knowing what sort of men are today perpetuating in California the old traditions of Standard.

The headquarters of the Standard Oil Company of California are located in San Francisco, and it is from there that the purchasing activities of the Company are directed by Mr. L. B. Waters, Manager of the Purchase and Stores Department. However, there is a local purchasing office maintained here in Los Angeles, and it is with this organization we are now concerned. It is situated in the Standard Oil Building, at 605 West Olympic Boulevard.

The buying personnel of the Los Angeles District Office consists of three buyers and four materials order men, all under the personal supervision of Mr. C. H. Tuttle, District Purchasing Agent.

"Tut", as he is familiarly known, is a native Hoosier. Before beginning his varied career in the oil industry, he spent seven years in gold and tungsten mining, part of which was devoted in assaying and survey work. His first oil experience was with the old Pacific Gasoline Company in 1919, at Taft. After five years there as a truck driver, chief clerk, and storekeeper, he was sent to Los Angeles as Purchasing Agent. After this company was purchased by the Standard Oil Company of California in 1926, Tut spent four years as general storekeeper at Los Angeles, and eight years as reclamation superintendent and assistant general storekeeper, at San Francisco. In 1938, he left California to become Superintendent of Purchases and Stores for the Standard Oil Company of Texas, at Houston. On March 16, 1940, he returned to Los Angeles to fill the post of District Purchasing Agent at Los Angeles.

Tut makes his home in San Marino. He professes to an appreciative ear for good music and doesn't deny his keen appreciation of a good, solid drive off the opening tee. He is a member of the Los Angeles Athletic Club, the Santa Monica Deauville Club, the Hollywood Athletic Club, and the San Gabriel Country Club. Anybody curious about how Tut keeps fit?

Mr. Tuttle's senior buyer and right-hand man is Edwin A. Conrad. Ed is a real old-timer in Standard service. He dates back to September morn, 1911.

Ed is a native Californian and when he goes back home he takes a drive to Arroyo Grande. (Anybody else know where that is?) He started with Standard in the purchasing department checking invoices; some time later he became an assistant buyer. Seven years later, in 1920, he was made a full-fledged buyer with the right to put his feet on the desk. After twenty-one years in this position—no, not with his feet on the desk—as a buyer, we mean, Ed has become an expert in the purchase of valves, pipe and fittings, machinery, refinery equipment, and the like, and has acquired a head of hair more than slightly off the gold standard.

Ed lives out in Glendale these days and puts in his spare time in back-breaking backyard farming. He is an active member of the Los Angeles Purchasing Agents' Association.

When a fellow works nearly twenty-eight years in one spot you'd think there would be some evidence of wear and tear, wouldn't you? Not so with Ralph Porter, though. Hardly shows any signs of it at all.

Ralph was born in Kansas, and took to laboring for Standard in Los Angeles on December 1, 1913, as a stenographer. When Woodrow Wilson called for volunteers in 1917, Ralph forsook his pothooks and symbols for rifle and bayonet. He served for a year and a half in the Army, twelve months of which he spent overseas. After the war, he returned to his old job with Standard and in 1937 was promoted to his present position as a buyer. His entire service with Standard has been right here in Los Angeles in the purchasing department. His

specialty is oilfield equipment and building materials.

Ralph lives in Los Angeles and enjoys an occasional weekend of fishing and golf. He is a member of the American Legion as well as other organizations.

The other member of the Los Angeles buying brigade parts his name in the middle: T. Winslow Barrington, although he is known more intimately as just plain "Tom". Tom is a native of Cambridge, Massachusetts, and for education what more natural than to patronize one's home industries; after graduation from Harvard, he came west and knocked out some post-graduate work at the University of California.

Tom first went to work for Standard at San Francisco in 1917, where he worked as assistant buyer, and as a buyer, until 1930, when he was made district purchasing agent at Seattle, remaining there for five years. In 1935, he really went traveling. He was transferred—of all places—to London, England, where he took over the post of Manager of Purchases for the California Standard Oil Company, Ltd. Two years later, Tom left Merry England's mist and fog, and came to Los Angeles. He has been here since, busily absorbed in the purchase of hardware, electrical supplies, chemicals, laboratory equipment, office supplies, and what'll you have? Tom lives out Hollywood way now; besides fishing, he takes his hunting in large portions and his golf in healthy slices. Does he miss London? Would you miss London now?

In introducing the materials order men, perhaps a brief word of explanation might be in order: A materials order man, as we understand it, is a sort of assistant buyer who handles the less complicated negotiations and generally makes himself useful to the buyer to whom he is assigned.

In point of service, Willard A. Bardwell takes precedence over his three compatriots. Willard was born in Aspen, Colorado, and educated in Salt Lake City. He first went to work for Standard as a clerk in the chief engineer's office at El Segundo, in December, 1917. In 1920, he was transferred to the purchasing department in Los Angeles. He is Tom Barrington's right bower and between them there isn't much they don't know about buying chemicals, electrical supplies, hardware, paints and the like.

Willard lives here in Los Angeles in the southwest part of the town. He is a member of the Los Angeles Purchasing Agents' Association. He declines to say what he does with his spare time. Hidin' somethin', do you suppose?

A. E. Lagerquist got his start with Standard on August 4, 1919. Gus is a native of Oakland, but since 1919, he's done plenty of running around for Standard. After spending four years as a timekeeper in the Producing Department at Elk Hills, he served as assistant materials superintendent at Bakersfield, as storekeeper at Taft, as materials clerk for the Engineering Department at San Francisco, and as warehouse floor foreman at Richmond. In January, 1935, he was transferred to the Purchasing Department in San Francisco, and in 1937 was sent to Los Angeles where he immediately began to acquire that other chin.

Gus helps Ed Conrad worry about the price of valves and fittings, pumps, engines, and such trinkets. While he admits to a weakness for golf, Gus says his all-consuming hobby is maintaining a healthy interest in many types of recreation.

L. E. Bushard's career with Standard has been both varied and lively. "Bush" was born a border gringo in the town of Nogales, Arizona, but the family moved to Los Angeles before anything serious could happen. Came Kaiser Wilhelm and his submarines and "Bush" took to the Navy for a year and a half. When Herr Wilhelm went into the cord wood business in Holland, "Bush" went into the hardware at Ducommun's. Just by way of experiment, he later tried out the California Hardware, and finally, in March, 1920, got a job in the storehouse of the Standard refinery at El Segundo.

The next fourteen years of "Bush's" life reads like a time card. One year as material receiving clerk, five years as a counter man, two years as materials order man, two years as material clerk, Engineering Department—all at the El Segundo Refinery. Then six months as store foreman in Los Angeles, two years as store foreman at Murphy-Coyote, one year as materials order man, Murphy-Coyote, six months as materials order man at Richmond, and finally, in 1936, he was transferred to the Los Angeles district purchasing office. Now "Bush" assists Ralph Porter in studying the current markets for bargains in oilfield equipment, tubular goods, building materials, and "all such stuff as that there".

"Bush" is a golfer, a fisherman, and a rancher, and on his vacations he paints houses. He is a member of the Los Angeles Purchasing Agents' Association and lives out in Beverly Hills.

And now comes the youngster of the group, W. R. Brocklehurst, who has been with Standard a mere twenty-one years. Like Gus Lagerquist, Ray Brocklehurst is a native of Oakland. The two were in high school together, Gus graduating a year ahead of Ray. Gus started as a hallboy in 1919 and Ray began as an office boy the following year.

Ray, however, took a slightly different route than Gus in reaching the same spot. He spent three years as a warehouseman, worked a couple of years as a compressor plant operator, two years as pipe yard foreman, four years as storekeeper, three years as a pipe specialist, and six years as a surplus materials appraiser and liquidator. Two years ago, Ray was given his present position as Materials Orderman and, oddly enough, these two Oakland boys, Ray and Gus, are both assistants to Ed Conrad in the purchase of valves, fittings, engines, pumps, and other heavy equipment. Busy man, this Ed Conrad!

Ray is a golfer (must have some exciting foursomes at Standard, eh?) and a gardener, and when he can get someone to hit it back, he enjoys smacking a shuttlecock over a badminton net. He is a member of the Oakmont Country Club and lives in Glendale.

Standard in Alberta

(Continued from Page 12)

with minor variations, be made a pattern for the description of dozens of Company ventures in other new fields in America and on other continents. It is a story of careful planning followed by long months of hard work and the expenditure of a considerable amount of money, and there are usually heartbreaks before there is success.

The success in Alberta gives hope for an appreciable increase in the parent Company's oil reserves. More than that, however, it means substantial help in a vital industry for Canada's program of development of her natural resources — both for the efficient prosecution of the war and for the expansion of Canadian industry which promises to follow.

So far, Canada's western oil production has not been as extensive as her needs. The Turner Valley field, about 125 miles west of Standard's Princess field, is now producing in the neighborhood of 22,000 barrels a day, and in Ontario there is some production, but on a lesser scale. Accordingly, it has been necessary to supplement these sources by the importation of crude oil from the United States.

New automobile tire is air-cooled by "ventilating" ribs on the walls.

Californian Honored By New York Stock Exchange

His numerous friends in the petroleum industry are congratulating Allan H. Crary, partner of E. F. Hutton & Co., Los Angeles, upon his nomination for election as a member of the board of governors of the New York Stock Exchange. Nomination is usually equivalent to election, event scheduled for May 12.

Allan H. Crary, whose firm is a member of the exchange, came to Los Angeles with his parents in 1896, from Albuquerque, N.M. He attended Harvard Military school in Los Angeles, and Stanford University.

In 1911, Mr. Crary went to work for Logan & Bryan in Chicago, and later in their Los Angeles offices. In 1917 he entered the brokerage business with his own firm under the title of A. H. Crary & Co., with his brother, Gordon B. Crary, a partner. The brothers sold the business to A. A. Hausman & Co., in 1923, and became co-managers of Hausman's Los Angeles offices. In 1928 they became partners of E. F. Hutton & Co.

Mr. Crary is chairman of the advisory committee of the Pacific Coast Association of Stock Exchange Firms. He is a member of the Chicago Board of Trade and the Los Angeles Stock Exchange.

In 1918 Mr. Crary served as an officer in the air service, being stationed in England.

Allan H. Crary

L. V. Shepherd Heads Union Specialty Sales

The formation of a subsidiary company, Unacal Products Inc., has been announced by Union Oil Co. of California. The new organization, with headquarters in Los Angeles, will manufacture and distribute household specialty products throughout the Pacific Coast area. L. V. Shepherd, formerly manager of service station sales for Union Oil has been appointed a director and president of the company.

Other officials and directors include A. C. Stewart, vice-president and director; C. W. Fitzpatrick, secretary-treasurer and director; R. L. Philippi, L. A. Gibbons, H. W. Sanders, directors. Jack Gordon will serve as sales manager for the organization.

L. V. Shepherd

Two Wells Active In Brea Canyon

Fullerton Oil Co. is completing its well No. 9 in the old Brea Canyon field after redrilling to 3758 ft. and landing a 6⅝ in. combination liner on bottom with perforations open in two intervals below the cementing point at 3150 ft.

Contractors Bell & Loffland have just spudded in Birch Oil Co.'s well No. 17.

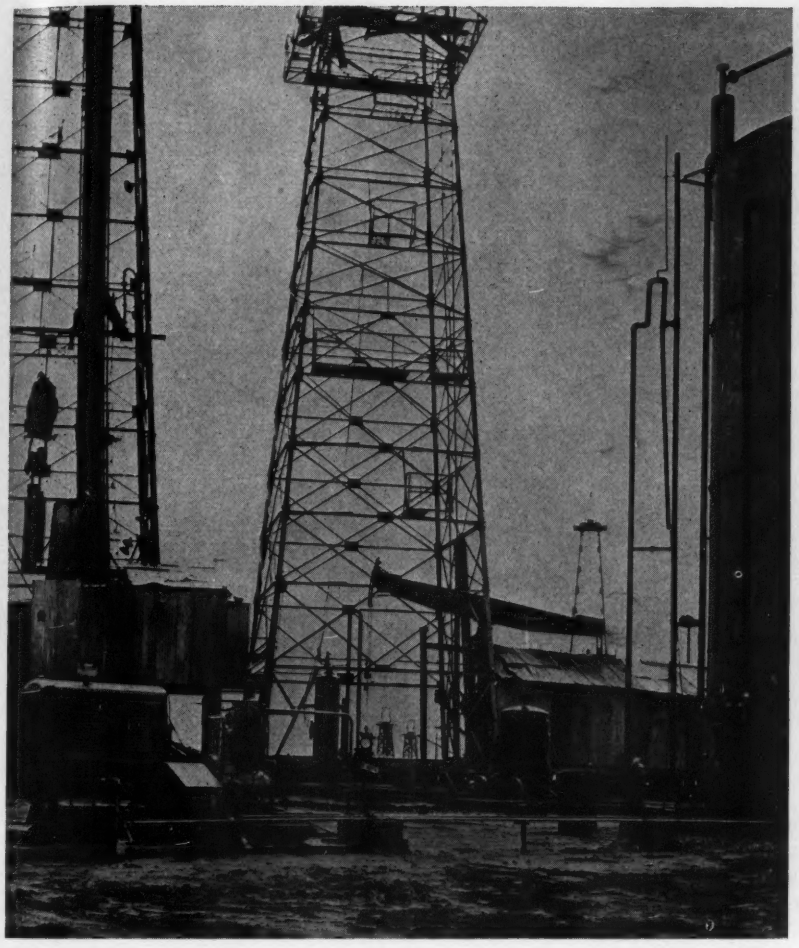
G. W. Walton Sales Head of Unit Rig & Equipment

George W. (Jack) Walton has been appointed sales manager of the Unit Rig & Equipment Co., Tulsa, Okla. Mr. Walton recently resigned as vice president and sales manager of the Emsco Derrick & Equipment Co., after having been connected with that organization for a period of fifteen years.

Prior to his connection with Emsco, Mr. Walton was connected with Wilson-Snyder, and previous to that he served five years with the National Supply Co., two years of which were spent in Europe with headquarters in London. It is interesting to know that Mr. Walton has also handled export sales for Emsco and will pay particular attention to the export market for Unit Rigs. He is a member of the Los Angeles chapter of Nomads.

Mr. Walton is a native Texan and received his early education there, but later attended the Missouri School of Mines. With Mrs. Walton, he will immediately establish his residence in Tulsa.

G. W. Walton



The site of Union Oil Co.'s deep test on Signal Hill, just across from Rockey Jerman's diggings, looked like a modern production equipment display.

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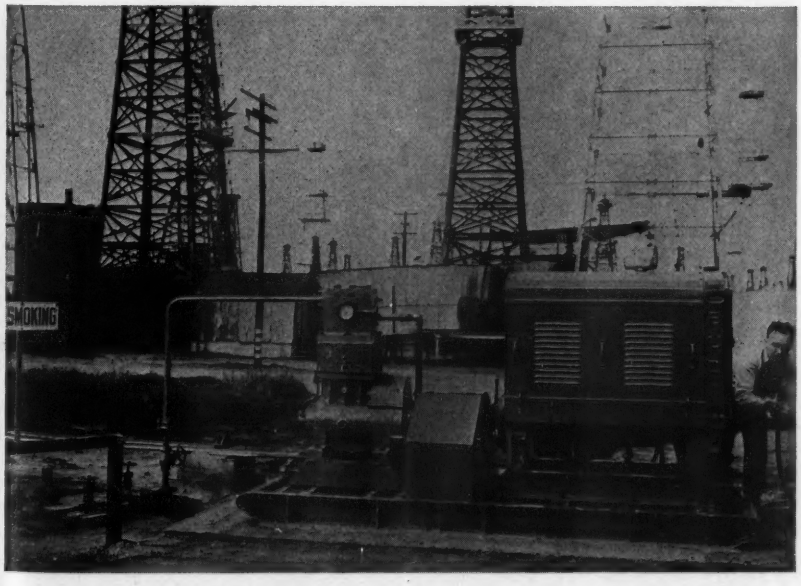
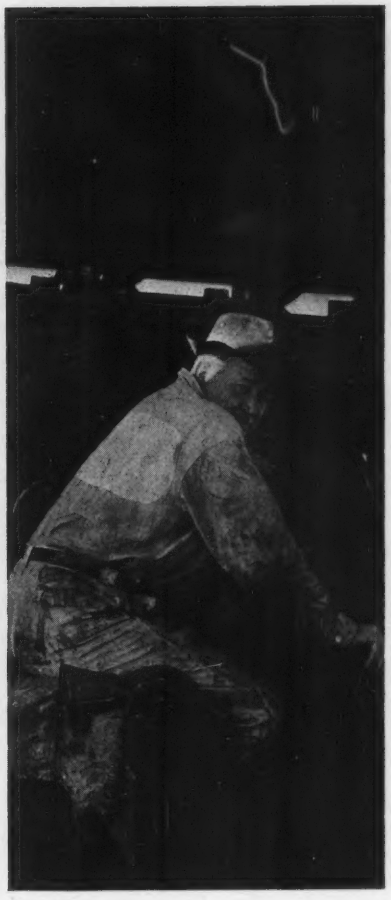


Here's a closeup of the hydraulic pumping unit used to put life in Union's Signal



Ray Porter was busy in Rosecrans.

Test Planned for Reef Ridge Area

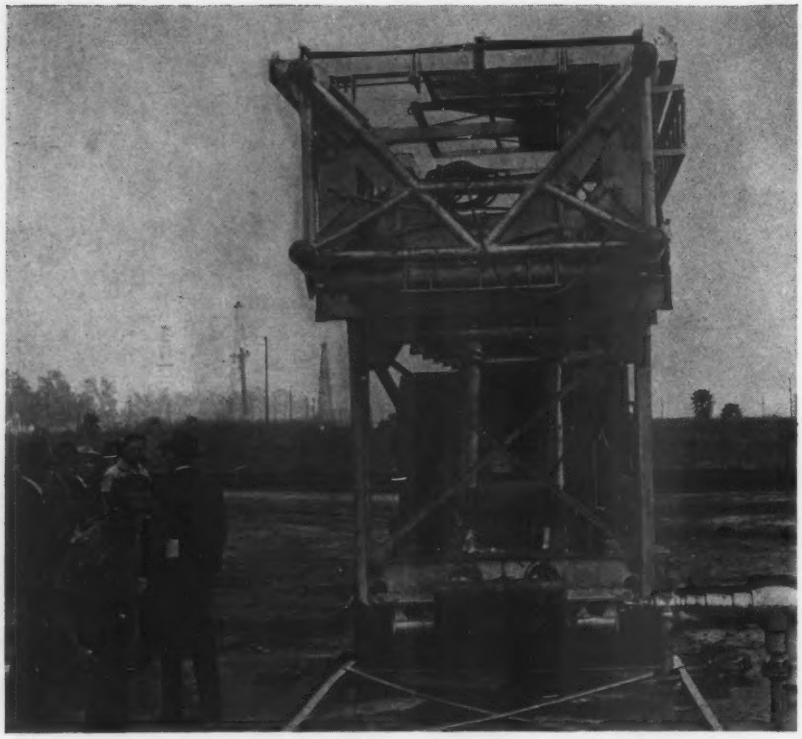
S. F. Easterbrook has filed his intention to drill a test southeast of the center of sec. 11,23-16 in the Reef Ridge district. Located in the hills some 1700 ft. above sea-level, the current test is the third for the central portion of the section, Carl W. Weller having drilled a shallow try in 1933 and Reef Ridge Prod. Co. another in 1935. The latter try is reported to have bottomed in 76 degree dips.

Blair Oil Co.'s well No. 1 in section 24 is still standing idle at 985 ft.

Dry Ice Wells In California

Drillers in the California desert near Brawley refused to be discouraged recently when they failed to strike oil. The well began gushing 1,000,000 cubic feet of carbon dioxide gas a day, which ought to satisfy anybody!

Today's market for carbon dioxide, the gas used in making "dry ice," is bigger and better than ever. While dry ice still finds its principal use in the chilling of



These new portable well servicing rigs are substantial from top to bottom.

trucks and packages for distribution of ice cream and in the fizz for all sorts of soft drinks and some alcoholic ones, a still greater use is in the offing through development of a mixture of dry ice and alcohol used in contracting steel and other metals to make extra-tight "shrink fits" in aircraft engines and other defense material such as tanks and anti-aircraft guns.

Outside the aircraft field, much dry ice is used to shrink cylinder liners into diesel engines. One leading automotive company uses dry ice and alcohol to shrink inserted valve seats part way, completing the job and assuring tighter fits by immersing the seats in liquid air, which cools them off to temperatures below 300°F. and makes it a comparatively quick and easy job to set them into place in engine blocks.

One of the most important uses for dry ice is seen, paradoxically, in the boiling of linseed oil, petroleum, and other raw materials used in formulating plastics. Such are harmed by oxidation and improved by thorough agitation during "cooking." A block of dry ice in the bottom of the kettle not only permeates the mixture with a protective atmosphere of carbon dioxide, but in the process of subliming (passing directly from a solid to a gaseous stage) in the bottom, it throws off bubbles which agitate the liquid.

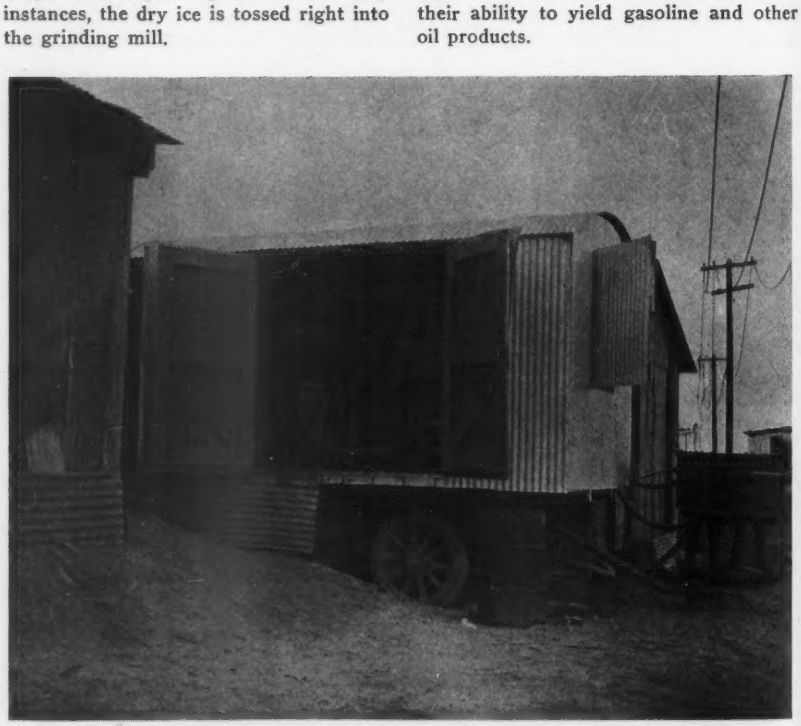
Similarly, dry ice is used in the dry-grinding and mixing of pigments and other chemicals subject to oxidation which enter into the manufacture of paints, lacquers, and printing inks. In many instances, the dry ice is tossed right into the grinding mill.

In California's Imperial Valley, where dry ice is plentiful, fruit and vegetable shippers mix it with water ice for refrigerator cars and get their products to markets in better condition for less money. Special dry-ice shipping containers for less-than-carload shipments are also coming along. Fruits, vegetables and meats not only get the benefit of cooling, but the protection which dry ice gives against oxidation.

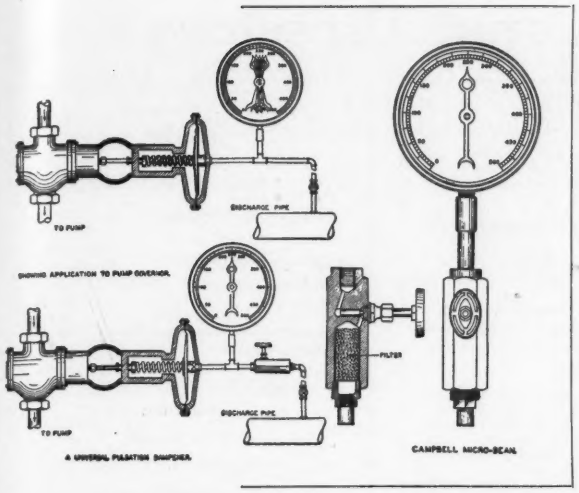
Newest use for dry ice and the gas it releases may be in the tenderizing of beef. Idea behind considerable experimentation is that carbon dioxide will keep bacteria and mold-forming organisms from getting the oxygen necessary for their growth.

Oil Supply From Coal

Pittsburgh laboratories gives assurance for the future of the gasoline age. While definitely establishing the process as feasible and in certain circumstances advisable, the Government technicians have not estimated the cost of the gasoline and oil produced from coal on a perfected quantity production basis. As a preparedness measure, in anticipation of the day when America's petroleum reserves are exhausted or in serious danger of depletion, the Bureau of Mines is making an intensive investigation of all types of domestic coals to determine their ability to yield gasoline and other oil products.



This is the electrical control trailer on the job at Honolulu's Buena Vista Hills deep digging.



Micro-Action Valve For Governors and Gauges

For dampening the pulsation of boiler plant pump governors and to eliminate "jitters" of the gauge hand, a novel device known as the Campbell Micro-Bean has been developed. It can be installed on the pressure line to the diaphragm of a pump governor for protection of the pressure gauge mechanism and tube, also the spring, diaphragm and stem packing. It is also effective as protection to any control valve, such as a back pressure or reducing regulator and for use with sensitive control instruments subjected to pulsating flow. The valve will handle steam, fuel oil, gas, water or other liquids, with simple adjustment for each viscosity and will if desired make a complete shut-off against extremely high pressure. The Micro-Bean consists of a solid brass body in which a filter is inserted for protection from foreign matter. The valve has an extremely slight taper so that very sensitive control of the shut-off is effected. This slight taper minimizes the tendency to pinch off, under changing pressure conditions, to approximately 2% of what is usual in an ordinary valve, according to the inventor. The micrometric control of the opening enables the operator to obtain the closest approach to full shut-off down to the last .0003 of an inch, regardless of the line content. In the Micro-Bean the solid metal body is said to minimize the effect of body strain. A 48-to-1 taper of the valve minimizes the effect of stem and screw compression strain since it takes 48 units of stem movement to effect one unit of closure. The device is universal in application for varied purposes up to 3000 lbs. pressure in the brass model and 5000 lbs. in steel. It is also made in stainless steel to meet highly corrosive conditions and will give any degree of stabilization desired by merely turning the valve. Any scoring which might eventually take place, (it is microscopic) can be simply ground out by shutting off the valve completely two or three times. Literature is available. The device is manufactured by J. A. Campbell Co., 645 East Wardlow Road, Long Beach, California.

New Patterson Ballagh Mud Gun Manifold

A multi-jet discharge for mud guns for rotary oil well drilling operations is provided by an improved fitting developed by engineers of Patterson-Ballagh Corporation. In place of a single nozzle used on their Universal Mud Gun, a four-way discharge is attached, known as the Patterson-Ballagh Mud Gun Manifold. It consists of a steel assembly of a manifold and rubber-lined nozzles. The assembly is screwed into the discharge pipe. By breaking up and directing the mud flow into smaller streams, the jetting effect is increased fourfold, according to the manufacturers.

By attaching this manifold assembly at the end of the discharge line, jetting is done beneath the surface of the mud pit, an advantage in making a more uniform mixture. It is believed that less oxygen is drawn into the mud, thus reducing the oxidizing effect. Less air is drawn into the pump suction, which is said to improve the pump action and reduce the pounding caused by an uneven suction.

By directing the mixing at the bottom, the operation causes less settling out of the mud weight material with resultant savings, it is claimed.

The mud nozzles are the standard size developed by Patterson-Ballagh in connection with mud mixing in tanks. These nozzles have extremely long life, due to the rubber used, which is the same compound as used in drill pipe and casing protectors manufactured by the Corporation, it is stated.

The manifold, being at the end of the discharge pipe, permits the discharge to be made anywhere in the pit and its direction can be changed to eject in a new position merely by pointing the gun. The mud gun commonly used is the double flow type in which there is no pump reaction or tendency to spin.

Details may be obtained from the manufacturers, Patterson-Ballagh Corporation, 1900 East 65th Street, Los Angeles, Calif.

2nd Annual Convention of Liquefied Gas Ass'n.

Natural gasoline and refinery men from plants, chemical laboratories, sales and engineering departments, have been issued an invitation to attend the 2nd Annual Convention, Pacific Coast Section, Liquefied Petroleum Gas Ass'n to be held in the Fairmont Hotel, San Francisco, June 9 and 10, 1941. The invitation is extended by Chas. E. McCartney, chairman of the sponsoring organization.

The liquefied petroleum gas industry is the fastest growing branch of the petroleum and gas industries and at this convention this new industry will be on full dress parade. Concurrent with it will be the 2nd Annual Pacific Coast Liquefied Petroleum Gas Exposition which will present a complete cross-section of the equipment and appliances manufactured to meet a variety of rapidly growing markets.

The program for the convention has been especially planned to interest all of the groups from the petroleum and natural gasoline branches of the industry with an excellent group of papers to be presented by outstanding authorities on the subjects presented.

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Oil Men's Calendar

Calif. Natural Gasoline Association. Los Angeles Chapter—Meets 1st Thursday Each Month, Barker Bros. Bldg., Los Angeles—Dinner at 6:00 (Optional). Taft Chapter—Meets Third Thursday Each Month.

American Society of Mechanical Engineers—Los Angeles Section—Meets 2nd Thursday Each Month—Barker Bros. Bldg., Los Angeles. Dinner at 6:30 (Optional).

May

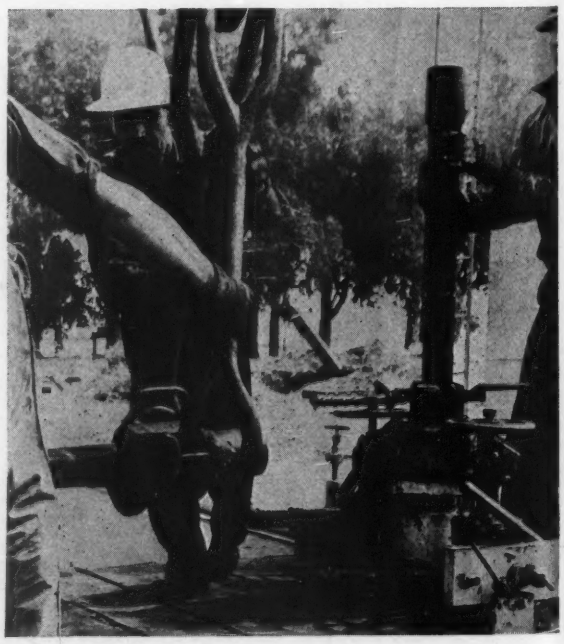
5-8—American Gas Assn., Natural Gas Section, Dallas, Texas.

19-23—American Petroleum Institute, 11th mid-year meeting, Mayo Hotel, Tulsa, Okla.

June

23-27—American Society for Testing Materials, 44th annual meeting, Palmer House, Chicago, Ill.

SAFETY TIPS



Elevator door up—Note good housekeeping and absence of stumbling and stepping hazards.